MACDONALD COLLEGE JOURNAL

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Farm · Home · School

THE MACDONALD COLLEGE JOURNAL

Better Treatment for Our Scientists

"Overpaid and underworked" are the words which, at one time would best describe the prevailing opinion with respect to Civil Servants. The tone of the discussion in the House of Commons during the debate on the agricultural estimates when farmer members paid tribute to the assistance given to farmers by research workers and criticized their "distressingly low salaries" represents a striking and refreshing change, as far as agricultural officials are concerned.

In replying to these criticisms the Minister is reported to have expressed opposition to the tendency "to make comparisons as between people who have university degrees and those who have not". He especially resented civil service advertisements which demanded college diplomas. He is reported to have stated that "best people in any country, and the most important, are the ones who work with hands", and he was not moved by any argument which would favour a person simply because he or she held a degree.

We heartily agree with the Minister in his admiration for those who work with their hands. We also agree that the mere possession of a university degree should not call for special favour. We do not wish to make anything of a statement which, taken from its context, may not represent at all the full opinion of a Minister. We feel confident that he himself would not lose a specialist in plant breeding, soil science, animal biochemistry or plant pathology on the basis of his manual skill, nor would he discriminate against him because he held an advanced degree. We agree that comparisons between degree holders and non-degree holders are futile and silly. But it is fair to point out that the problems with which the Department of Agriculture has to deal should only be attempted by those who have had the best training that only our best Universities can give. In the course of training the student, incidentally, acquires a degree, which is the "hall mark" of that training. The degrees alone may not guarantee the competence of its holder to attack any particular problem, but the higher ranks of our research workers must continue to be recruited from among those who hold such degrees, if the highly technical problems that confront the farmers are to be solved. The skilled craftsman and the practical farmer have each their own peculiar contribution to make, but the field of scientific research must remain the concern of gifted, trained and experienced scientists.

Whatever criticism may be levelled against the Civil Service Commission we have never understood that they have overlooked the factor of experience. When we look at an advertisement calling for university training up to the Ph.D., five years experience, research ability as indicated by the publication of original papers, good address, ability to write popular and scientific articles, to address public meetings, etc., all for a salary of $2400.00, we sometimes wonder whether they expect an Einstein for their money!

The Minister comes from a great wheat growing province — a crop whose profitable cultivation is menaced by rusts and smuts, by saw-flies and grasshoppers and the successful marketing of which in manufactured form involve a whole series of scientific problems. A serious and cautious scientist, whose figures can never be seriously challenged, has given the figure of $22,242,-000.00 as the estimated annual increase from 1939-43 in the value of the wheat crop in Manitoba and Eastern Saskatchewan as a result of the introduction of rust resistant varieties alone — an increase that would repay thirteen times over the total expenditure made by Canada on wheat rust research since the beginning of this work. This is only a sample, of scores that might be cited, of the work of agricultural scientists in producing higher yielding, better quality, better adapted disease resisting varieties, in making or applying basic scientific discoveries to the control of animal disease, in the solution of problems of soil fertility, of processing farm products and discovering new uses for them. The splendid farmers of Saskatchewan, and of other provinces, deserve the services of the best brains that the country can produce in the solution of such problems. Even more than the farmer, the country as a whole benefits,

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Farmers Have World View

A report of the annual meeting of the Canadian Federation of Agriculture at London, January 21 to 24.

by R. Alex Sim

Steady growth, solid consolidation, and a growing sense of strength were evident as the Canadian Federation of Agriculture reviewed its work for 1945. As it assessed its tasks for 1946, the world view was everywhere evident.

There are two prongs to Canadian farmers' interest in world affairs. These two prongs will reach out, he hopes, and encircle his major objective — a stable peace-time market.

The first has to do with world government: the United Nations Organization and specifically F.A.O. with the proposed International Federation of Agriculture (I.F.A.).

The C.F.A. was represented at the F.A.O. conference at Quebec. (Its activities are summarized in an attractive pamphlet which the Adult Education Service will supply on request.) But in the opinion of the farmers who gathered at London from all parts of Canada, the I.F.A. is the really important, and potentially powerful body through whom farm organizations can work in influencing United Nations food policies. The drive of the C.F.A. in this direction is clear cut and precise, at least up to the present time.

The second interest is in the policies of the Canadian government in international affairs, and particularly in trade agreements. What the Dominion government does about world trade will be conditioned by its support for certain industries, and certain products, its sympathy toward agriculture, and the zeal with which it pursues a full employment program. The question of full employment raises other questions which are matters of internal as well as foreign policy: price control, price floors, subsidies, and family allowances and the cost of living bonus.

In a sense the deliberations at London had these three emphases: (1) the direct participation of the Federation in world affairs; (2) influence of the Federation on the foreign policy of the Canadian government, and (3) the formulation and recommendation of domestic policies for Canada.

The resolutions that the directors placed before the open meeting and passed were as follows: Farm Income Tax, Sales of War Assets, Dominion Marketing Legislation, Recommendation from the Dairy Farmers of Canada, Equity and Security in Farm Prices, Feed Grain Policy, Protein for Home Mixing of Feeds, Hog Policy, Long Term Livestock Policies, Surplus Cattle to the U.S., Meat Price Spreads, Rail grading, Board of Livestock Commissioner, Soil Conservation, Canadian Wheat Board, Initial Payment of Wheat, Malting Barley, Tax on Malt, Drawback on Wheat to Millers, Crop Insurance, Farm Labor Service, Farm Labor, Indian Welfare, Old Age Pension, Pensions for the Blind, Dominion Gasoline Tax, Farmers' Holiday (it's to be one day, Friday, June 21st, the longest day of the year, neighbour), Increased Salaries for Civil Service Employees in Agriculture, Cartel Investigation Report, Initial Price for 1946 Wheat Crop, and Daylight Saving.

While there is no doubt that the Federation is concerned with the world scene, (the president, H. H. Hannam, devoted half of his presidential address to world affairs), the interest of the member groups is still largely domestic, and one might add rightly so. For, of the thirty resolutions which passed the annual meeting, twenty-three were concerned with domestic issues, and only two with world affairs; the remaining five overlapped the two areas.

The resolutions dealt with details of farm policy, in some areas comprehensively, particularly those areas affecting dairy interests, and the interests of the western farmer.

The meeting of the Dairy Farmers of Canada at Niagara Falls, and of the Western farmers at Winnipeg, both of them prior to the Western Conference, would seem to indicate that the Eastern Canada Conference on Agriculture should be revived to formulate and digest policies of special interest to Eastern farmers.

That is not to suggest that there is animosity or rivalry between East and West. To the contrary, one could only be impressed forcibly with the cordiality, with the common bond (created in no small measure by National Farm Radio Forum), with the determination that if they are to be hanged, the Eastern farmer will hang with the Western farmer, rather than separately. As is the case with all friendship, cordial working relations do not exclude differences of outlook, nor the need for compromise. The revival of the Eastern Farm Conference would simply permit more careful preparation for the momentous national meeeting.

It is interesting to analyse the resolutions from another point of view, that of subject. Twenty-one out of the thirty resolutions deal with subjects of economics and marketing. Seven were of general interest such as war assets, daylight saving, and gasoline tax, while only two referred to matters of a social or cultural nature: Indian welfare, a Farmers Holiday.

Twenty-one resolutions on matters of price and farm income is not too many. Indeed it is too few, and as other branches of the industry such as the producers of beef, butter, and poultry products become better organized, we

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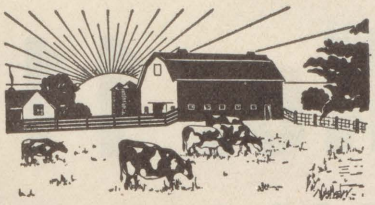

AGRICULTURE

Articles on problems of the farm

The Problem of Mastitis in the Dairy Herd

by W. B. Durrell

Bovine mastitis is becoming more prevalent year by year. Economically, its importance to the dairy industry, herd owner and processor cannot be over-estimated. In the opinion of many it is the most important disease of dairy cows.

The word *mastitis* means an inflammation of the mammary glands or udder. This condition, often spoken of by dairymen as *garget,* may manifest itself by various symptoms and hence is most easily described by classification into four distinct forms: acute, subacute, chronic and latent.

Acute mastitis is characterized by the sudden appearance of a severely swollen, painful udder or quarter which may be red or bluish in colour. There is either no secretion or a small volume of bloody or watery milk. In addition, this type is characterized by toxic symptoms such as high fever, lack of appetite, failure of rumination and drowsiness; this sort of case frequently becomes a source of infection to a non-infected herd.

The subacute form, as the name implies, is a mild manifestation of the acute form, with less swelling and usually no indication of systemic complications. More commonly, it occurs as a phase of *chronic mastitis.*

Chronic mastitis is the form most prevalent as a herd infection. Distinct symptoms may not be presented apart from an occasional change in the milk which is "curdy" or "flaky" in appearance, especially the first milk expressed from the affected quarters. This infection gradually shows itself by a reduced milk flow from the deceased quarters. A few weeks or even a year may elapse before this is noticeable, but frequently this drying off is noticed by the dairyman sooner, as for example when the cow is fed heavily for extra production or when her udder is bruised in some way. Consequently, careful manipulation of the udder will reveal thickening of the teat or deposits of hard "repair tissue" embedded in the glandular area. There may be a large amount of this fibrous tissue replacing normal secreting tissue, or there may be little; in the latter case slackening of the quarter or entire udder occurs, leaving what is commonly called a "light quarter."

Latent infection occurs in many cows but usually escapes notice until a routine examination of milk samples from the entire herd is made and the causative bacteria found. Cows with *latent mastitis* may appear normal at all times.

It is generally conceded that bacteria actually cause most cases of mastitis but the importance of contributing factors to bacterial invasion of the udder deserves emphasis. The group of bacteria known as *Streptococci,* particularly *Streptococcus agalactiae,* occurs in the majority of mastitis cases, but upon occasions *Staphylococci, Cornebacteria* and *Coliform* species are encountered; the latter often promote a rapidly fatal course of the disease.

How mastitis may occur and spread

Contributing to the occurence and spread of mastitis in a herd are the following factors:

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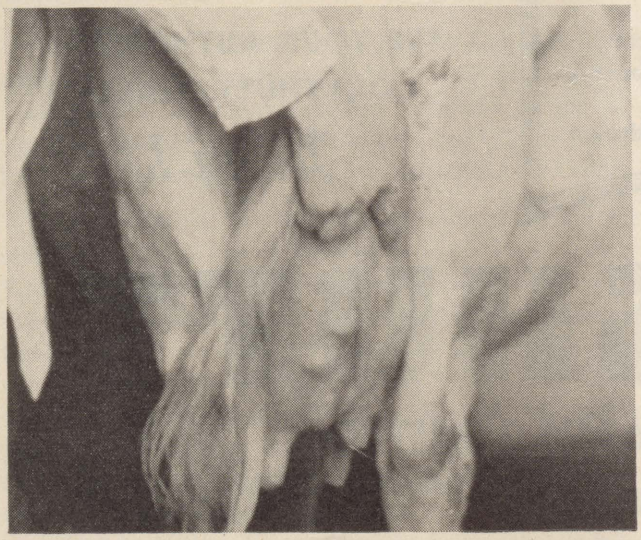
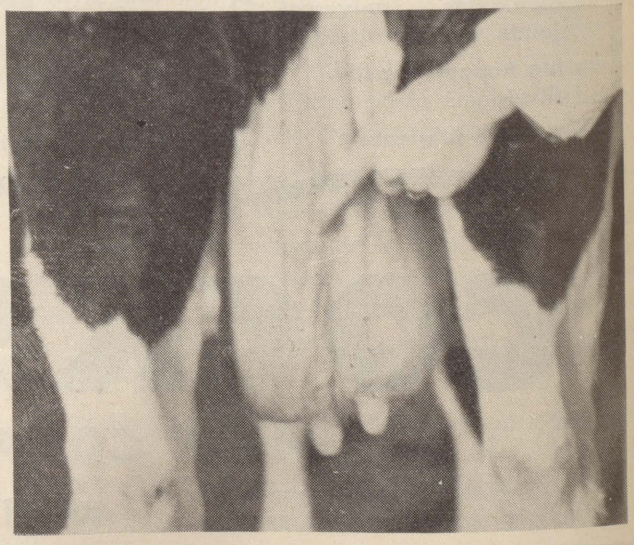


A "blind" quarter.



Chronic mastitis: a fibrosed quarter.

NEW TECHNIQUE IN THE TREATMENT OF BOVINE MASTITIS

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Sulvetil is the trade-mark for a homogenized suspension of sulfanilamide in light mineral oil designed for injection into the infected quarter through the teat canal in the treatment of streptococcic or staphylococcic mastitis. The new Abbott specialty is supplied in bottles containing 50 cc. of the suspension, a quantity generally sufficient for one injection into an infected quarter. In streptococcic mastitis, Kakavas* and his collaborators determined the infected quarters by making cultures of the milk on tryptose-blood agar. Each infected quarter was emptied and 40 cc. of the sulfanilamide in oil emulsion was injected into the quarter by means of a hypodermic syringe and a teat-tube. Breaking down the results, of the total 265 quarters treated, 251 (94.7%) were cured and 14 (5.3%) were not cured following one course of treatment consisting of daily injections of the suspension over a four-day period. Detailed literature on Sulvetil will be supplied on request.

Sulvetil is available through your local Druggist.

*Kakavas, J. C., Palmer, C. C. Hay, J. R., and Biddle, E. S. (1942): Homogenized Sulfanilamide-in-Oil Intramammary Injections in Bovine Mastitis, Am. J. Vet. Research, 3:274, July.

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Poultry Questions Answered

by W. A. Maw

Is egg size related to hatchability?

Egg size is an important factor which is inherited by a chick from its parents. Eggs averaging two ounces in weight, ranging from 23 to 26 ounces per dozen, appear to give the most satisfactory hatching results. Eggs from yearling or older hens should weigh 26 ounces per dozen to ensure producing pullets which will average to lay two ounce eggs. Small eggs produce small chicks. Only normal shaped eggs of required weight are recommended for best results.

What is the importance of the breeder or hatching mash?

The breeder mash is no doubt the most important ration fed to the poultry flock. So much depends on the feeding of the breeding flock that no poultryman producing hatching eggs can afford not to feed this type of mash to all breeding flocks. Be sure to start feeding this mash in place of the laying mash at least three weeks before it is time to start collecting eggs for setting.

The properly balanced breeder mash will ensure strong fertile eggs carrying the necessary nutrients to grow a healthy embryo which will hatch, live and grow. Higher hatchability, better livability and better growth can be counted on if the breeding flock is properly fed.

How soon after mating a pen can eggs be safely collected for incubation?

Where the proper number of males is used in the mating (at least one to each fifteen general-purpose females) eggs could be saved after five days of mating. Be sure that the breeders have been getting a breeder mash at least three weeks before eggs are to be saved for setting. Where possible, use males that are agreeable in the pens and only those (if cockerels) which are well developed physically. If a group of males is being used select a uniform lot and introduce them into the pen at one time to avoid undue fighting and dominance developing.

How do the different grades of dressed poultry vary as drawn carcasses and in cooking results?

It is good economy to produce high quality products. Higher returns for labour and feed result from such sales. It is also economy on the part of the consumer to purchase the graded product. The high quality carcass not only gives a more nutritious meal but more edible meat, and less fat and moisture is cooked out while being prepared for the table.

The average roaster dresses about 89 per cent of the live weight and when drawn is 80 per cent of the dressed weight. The cooked drawn weight represents 74 per cent of the original drawn weight; 59 per cent of the dressed weight and 53 per cent of the live weight. The cooked meat, skin and fat represent 58 per cent of the drawn carcass and the bones represent 16 per cent. Approximately 25 per cent of the original drawn weight is lost in cooking by fat and moisture being cooked out, although only a part of this is a total loss, that in passing off as moisture in the air, the balance is used to make gravy for serving.

On the basis of grade distinct differences are seen in the drawing and cooking losses. In the figures presented in table form it is noted that A grade stock of 5.8 pounds (average) show 17.8 per cent waste in drawing, whereas B grade stock of 5.4 pounds show 18.4 per cent waste and C grade stock 22.3 per cent waste.

The cooking results in roasting these same weights of stock in the three grades show differences in fat and moisture losses through cooking — 28.6 per cent for A grade and 30.5 per cent for B and C grades. The percentage meat on the cooked carcass varies inversely with the cooking loss, the higher amounts of 56.0 per cent on A grade carcasses, 52.5 per cent on B grade carcasses and 51.3 per cent on C grade stock. The proportion of cooked bone in these carcasses increases with the lower grades: 15.1 per cent for A grade; 16.8 per cent for B grade and 18.1 per cent for C grade.

GRADE AS INFLUENCING DRAWING AND COOKING RESULTS

PER CENT WASTE IN DRAWING

Grade	Average dressed weight	Per Cent waste
	lbs.	
A	5.8	17.8
B	5.4	18.4
C	5.3	22.3

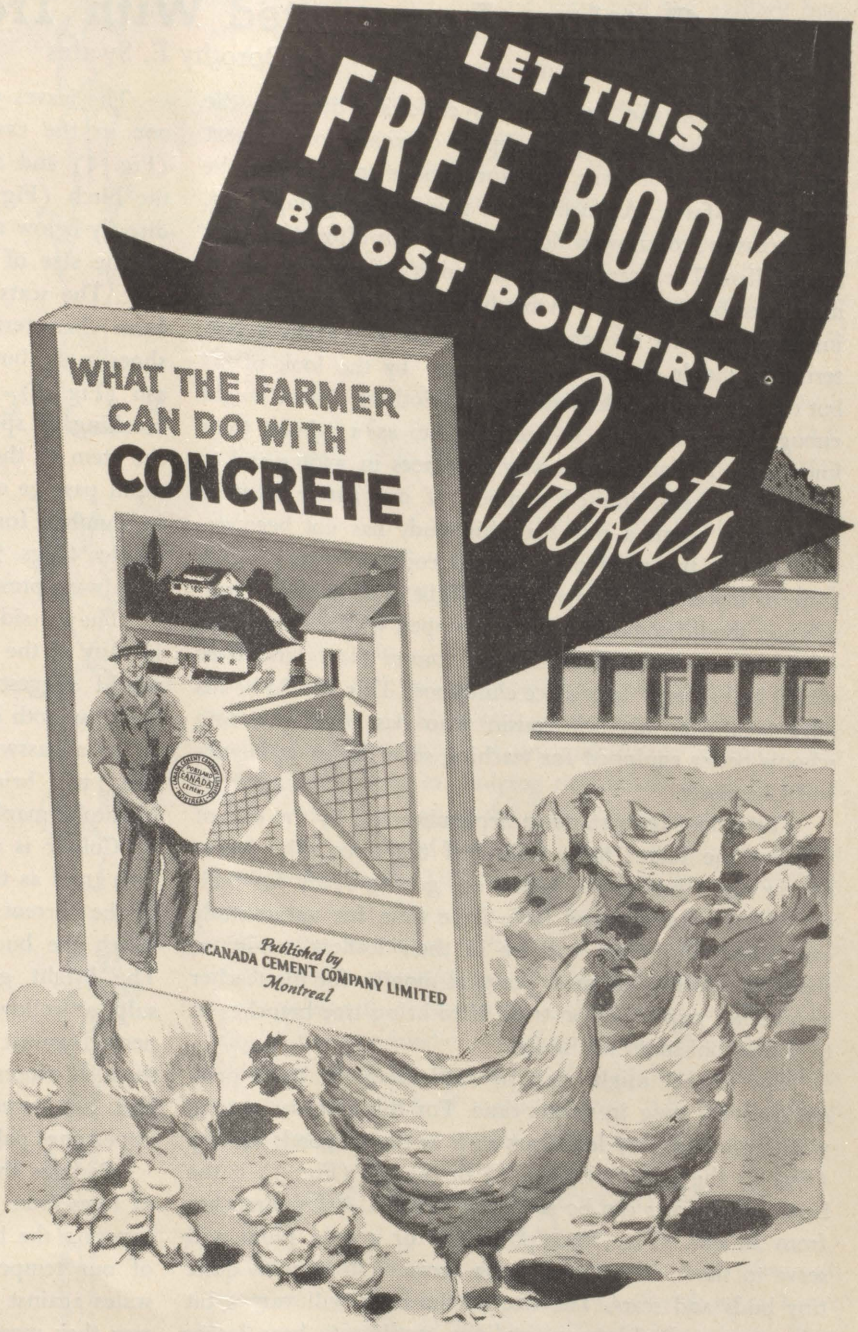
COOKING RESULTS
(Per cent of drawn weight)

Grade	Per Cent loss fat and moisture	Per Cent meat	Per Cent bone
A	28.6	56.0	15.1
B	30.5	52.5	16.8
C	30.5	51.3	18.1

Is it necessary to trapnest layers for an entire year to get facts on egg production and size?

The trapping of layers throughout the production year is a laborious task and adds greatly to the cost of producing pedigreed breeding stock. Individual and family production records are essential to any progressive breeding policy. It has been shown, however, that so-called 7-day per week trapping is not necessary and the Record of Performance policy now allows 5-day per week trapping for official records. The number of eggs laid on the five-day basis is then multiplied by seven-fifths to obtain the approximate calculated record for the year. Various other methods, such as trapping only the first week in each month gives 97 per cent accuracy; or two days each month gives 95 per cent accuracy.

Egg size can also be calculated on a highly accurate basis with short-term periodic weighing of eggs. Such facts will greatly reduce the necessary work in handling such records and, at the same time, safeguard the accuracy of records for the breeding flock.



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Getting Acquainted With Trees in Winter

by Dorothy E. Swales

The farmer and the farmer's child are often in the woods in winter, cutting the supply of wood for the next season, getting out some logs for lumber and tapping the maples in March. At such times, it is not only important, but necessary, to know which tree is which after the leaves have fallen. The average farmer knows a few of the common trees by their bark. A birch, a beech or a poplar, for instance, presents no problem. Most farmers know a butternut, a maple or an ash in winter "by the look of it" but cannot pass their knowledge on to others. I have taught enough farmer's sons to realize that, as a whole, their knowledge is limited to a very few trees in winter and to more, but a still limited number, of our native trees in summer. It seems a pity that this study has not been encouraged in the rural parts of our country, where a rich store of material is always within sight. The average farmer's son should come to college equipped with a knowledge of the names and habits of the common plants and trees which he has seen daily since childhood. This should be his advantage over his city cousin who has been attending schools better equipped for teaching such things as Physics and Chemistry.

The school term starts in September and by the end of October the leaves have fallen off the trees. The leaves appear again just as the pupils are getting ready for their spring examinations and have little time for nature-study excursions. The trees will be in their leafless condition, therefore, during the most practical months for the teacher to take her pupils out on trips or to bring tree branches in to the school-room for study.

The teacher might start by explaining the parts present in every twig in winter-time. For this purpose a twig with large buds and leaf scars such as the shagbark hickory (Fig. 4) the butternut (Fig. 1) or the ash (Fig. 3) is the best, as the parts can be seen very readily. A few branches from an elm (Fig. 5) a pin-cherry or a wild plum will serve to show, in contrast, some common trees with quite tiny buds and scars. The size of the buds will vary a bit on young and old trees, saplings tending to bear larger buds than the old trees, but the size of a bud is a very important point to remember in distinguishing one tree from another in winter.

The bud at the end of the twig is usually larger than the other buds (poplar, Fig. 10), and is called the "terminal" bud. The buds lower down, which developed in the axils of the leaves, or in the angle between the leaf-stalks and the twig, are called the "axillary" buds. All these buds contain rudiments of next season's shoots, but if all grew, the tree would be a matted tangle of branches unable to get the sunlight they require. Usually the terminal bud sends forth a shoot and most of the axillary buds remain dormant unless pruning of, or injury to, the branches occurs.

The leaves which fall leave a scar, a great big whitish one in the case of the butternut (Fig. 1) or hickory (Fig. 4) and a narrow inconspicuous one in the case of the birch (Fig. 2) or beech (Fig. 8). Each scar occurs directly below an axillary bud and its size depends directly on the size of the leaf-stalk which was attached to that spot. The scars are decorated with little dark dots which form characteristic patterns on the surface, small horse-shoes in the butternut (Fig. 1) and a crescent in the white ash (Fig. 3). These little dots are the scars left by the breaking of special strands of tissue which pass up from the stem to the leaf, and they served in summer for the rapid passage of water up to the leaves. They are constant in number for certain trees such as the red and sugar maples (Figs. 9 and 11) and the willows, in which three are always present.

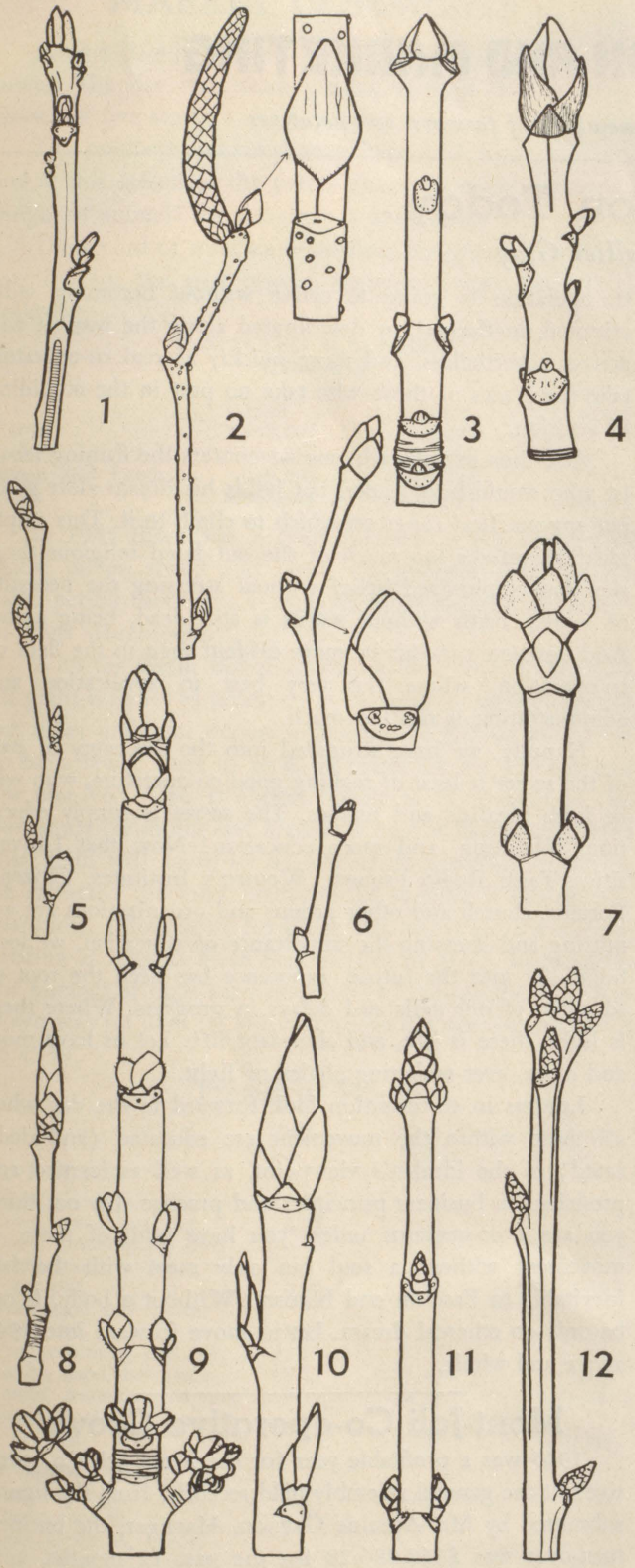
The outside of the bud yields many clues as to the identity of the tree. A bud which is very resinous or sticky would suggest a balsam poplar or a horse chesnut; a shiny, smooth bud will suggest a willow, a trembling poplar or a basswood; a downy or velvety bud on the other hand will bring to mind the ash, the butternut or the Manitoba maple (Fig. 7).

Colour is an important point in the identification of such trees as the red maple, in which the buds and twigs of the current year are deep red, and of the basswood in which the buds are a striking red (occasionally green). The bright golden-brown of the beech buds and the sulphur yellow of the bitternut hickory stand out prominently against a background of snow, and make spotting them in winter easy. The shagbark hickory has a two-toned bud, the lower scales being dark brown and hard and the upper ones pale and downy.

Perhaps the most reliable feature for the identification of trees from buds is the number and shape of the scales covering the bud. Each tender growing point of the buds of our temperate zone trees must be protected by such scales against winter injury. The number of scales and the way they meet or overlap, is quite constant for each kind of tree. In the hard maple (Fig. 11) and the beech (Fig. 8) they are arranged very regularly and overlap like fish scales. In the willow only one scale, shaped like a long narrow hood, covers the bud. In the basswood (Fig. 6) three scales are usually visible, one much larger than the others, giving the bud an unsymmetrical appearance.

Many other points will be noticed when a study of twigs is made in the class-room or at home — little drops of gum on the twig of the poplar-leaved birch (Fig. 2), the fluting or ridging of the twig of the red oak (Fig. 12), for example. Each person may develop his own pet way of recognizing the twig of any particular tree.

If a large variety of trees have been collected it is possible to separate the ashes and the maples from all the



1. Butternut, showing large leaf-scars with "horseshoes". 2. Poplar-leaved birch, showing droplets of gum on twig and solitary catkin characteristic of this species. 3. White ash, showing stiff twig and crescent-shaped leaf-scar. 4. Shagbark hickory, showing two-toned bud and large leaf scar. 5. American elm, showing four small leaf-buds and one larger flower-bud. Twig zig-zag. 6. Basswood, showing unsymmetrical but and zig-zag twig. 7. Manitoba maple. Buds opposite, downy-grey. 8. Beech. Buds golden-brown, sharp pointed. 9. Silver or soft maple. Buds opposite, not sharp pointed. Clusters of flower-buds at base of twig. 10. Cottonwood poplar. Buds resinous, glossy chestnut brown. 11. Sugar maple. Buds gray-brown, sharp pointed, opposite. 12. Red oak. Buds light brown, sharp pointed, stem fluted. All natural size except the butternut, 1/3 natural size, silver maple, twice natural size and sugar maple, 1½ times natural size. The single bud in Figure 2 is four times natural size.

rest by the fact that the leaf scars and the axillary buds are arranged in pairs, or directly opposite one another all the way down the stem (See Figs 3, 7, 9 and 11). In summer the leaves arose in pairs, and in winter one can readily see that the branches of these trees are also in pairs, unless an injury has occurred to one of the pair. A few of our shrubs, such as high-bush cranberry and dogwood also show this paired arrangement, but it is easy to recognize an ash or maple tree at a distance on this one point alone. These two can be separated by the fact that the ash twigs remain much stiffer and stouter to the tips than those of the maple.

The drawings accompanying this article were made with the aid of a magnifying glass and were drawn carefully to scale. It is hoped they may be a guide to anyone starting this study. A Government publication of 1939, "Native Trees of Canada" (Bulletin 61, Dept. of Mines and Resources, Ottawa) may be obtained for fifty cents. It contains numerous illustrations of leaves, twigs and buds of our native trees, and could be used to identify the many species of trees in your locality not included in this article. There are several books devoted to winter botany, and the names of these would be sent on request to anyone making a more intensive study. A magnifying or reading glass would greatly help in studying the details of buds, but it is not necessary except in the case of very small ones.

In conclusion, let me urge country people to inform themselves upon the interesting plant and animal life which surrounds them. They can find happiness and recreation in a winter excursion with the school teacher, or on a strictly family excursion in which all members take part in recognizing the trees they pass, in listening to the drumming of the woodpecker, the cheerful chatter of the chick-a-dees, in watching the antics of a squirrel or the mass movement of a flock of snow buntings. All this makes up the pattern of a sunny winter afternoon.

Plant Protection Board Meets at Quebec

The potato crop is worth anywhere from fifteen to twenty million dollars every year to Quebec farmers, hence the recent meeting of the Potato Committee of the Plant Protection Board at Quebec devoted most of its attention to studying measures which can and should be taken to protect this important crop.

A general study of measures to protect the crop, both in the field and in storage, was made; spraying methods and materials were discussed and some of the newer insecticides and disinfectants were described.

The new edition of the "Potato Protection Guide" is prepared and it will be available for distribution shortly.

CO-OPERATION AND MARKETING

A page of interest to members of farmers' co-operatives

Co-operation Today

by Lillian Collier Gray

Co-operation began when the cave-man discovered that by enlisting the help of his neighbour in the lifting of a stone he could accomplish a task he was utterly unable to do alone. Since that far date, co-operation has come a long way. It has still a long way to go. But never in its history has the outlook for its arrival appeared so bright. An awakening is taking place throughout the world. An awakening to the crying need for something better. And no matter whether the true crusader for a better world follows the light of religion, ethics, economics, philosophy, social reform, or any other, almost invariably he arrives at the conclusion that only by co-operating can the world live in peace.

One of the most hopeful things about our world is the way we do arrive in the face of everlasting obstacles and opposition. Co-operation is moving inexorably toward its goal, despite ignorance and indifference and opposition. Because here and there, over the face of the earth, a few individuals of vision, dedication and determination have carried the banner, and have done the ploughing, seeding, and tilling, others are reaping the harvest. And sometimes those who reap come to see the worth that is in this dream and effort from which they are deriving benefit; and they, too, add their vision and strength to that of the others.

Co-operation needs and must have two motives — idealism and realism. Without the idealist approach, it must be entirely business. Without realism, it is certain to fail because of the lack of good business practice. It is difficult to say which attitude is the more important, for in either case one cannot accomplish without the other. They are as important to each other as are a man and woman to a marriage partnership. But, unfortunately, they are not always found well-balanced in every co-operative enterprise. Nevertheless, the outlook for their common inclusion improves.

Co-operative enterprise today has its strengths and its weaknesses. Probably it's most serious weakness lies in this very lack of balance between idealism and realism. When one comes in contact with a considerable number of members and employees of the co-operative, it is at first startling, even shocking, to discover how many are not co-operators at all. In the case of the employee, too often he is working at a job, and that is all there is to it. As for the member, he has found a new way of doing business which looks profitable to him. The philosophy and principles of co-operation are as alien to the thinking of these people as is Taoism. In the face of this, one wonders how Co-operation is going to arrive without becoming sadly crippled, ineffectual, or deteriorated along the way. It will arrive, nevertheless, and more quickly as real co-operators take the places of those who take no part in the moulding of a vision.

And then occasionally one encounters the flaming idealist who would be a leader, but holds his dream aloft without any practical rungs on which to climb to it. This empty idealism smacks too much of the out-dated religious theories that emphasized belief without stressing the necessity of works. Faith without works is still dead, being alone. And nowhere can this be more evident than in the field of co-operation, where the very best in application and administration is not too much.

Happily, we have struggled into the discovery of part of the secret at least of making good co-operators, who will be both idealists and realists. The secret is simply education. Education, and more education! Now that Universities, Farm Radio Forums, Women's Institutes, Citizen's Forums, church and other groups and organizations are admitting and stressing the importance of education, we look hopefully into the future. Ignorance has been the root of so many of our evils and delays in progress. Where there is light, there is life, and abundant life. Let us have more and more, ever-widening circles of light.

Leaders in co-operation look forward to the day when all those within the movement are educated (and dedicated) to the idealist's viewpoint, as well as learned and proficient in business principles and practice. Do not think you are a co-operator unless you have both of these. A movement without a soul can only meet with the fate inevitable to Fascism and Nazism. Without a body, it can be only an ethereal dream. Let us move forward into 1946 aware and whole.

Mont-Joli Co-operative Grows

1945 was a profitable year for the Mont-Joli Co-operative. At the general assembly held recently, from the figures submitted by Mr. Antoine Gagnon, Manager, the business turn-over was $368,886.28 for the past 12 months, with a profit of $12,000 and other receipts amounting to $4,000.

This is the most successful co-operative of the Rimouski District. It has a splendid potato grading service for marketing purposes, a candling station and a large grist-mill. Established twelve years ago, the Mont-Joli Co-operative has continually progressed, thanks to the admirable co-operative spirit of its members and to its competent Board of Directors.

MARKET COMMENTS

January 1946 recorded a slight advance in live stock prices. The rise was much greater in hogs than in other classes of live stock.

The numbers marketed may have had some influence and at this season of the year a glance over the past years' output of animals for slaughter is interesting.

The record of number of animals slaughtered under inspection for the past year as compared with 1944 is as follows:

INSPECTED SLAUGHTER
(Number)

	1944	1945	Per Cent Change
Cattle	1,354,104	1,820,127	+34
Calves	660,556	781,817	+18
Sheep and Lambs	949,096	1,169,124	+23
Hogs	8,766,441	5,683,727	—34

In 1945 there was a great increase in the number of cattle, calves, sheep and lambs slaughtered. And for the same period there was a drop of three million in number of hogs slaughtered.

With the Grain Board appealing to farmers to forward all grain supplies as promptly as possible — not only wheat but other grain for export to Europe — it is an advantage to have fewer hogs to feed, as grain can be too precious for hog-feed. This is almost certain to be a more or less temporary condition and sooner or later it may be expected that grain will again be in sufficiently plentiful supply to be marketed the most profitably by turning it into bacon. Naturally, a floor price for grain will lessen interest in hog-feeding as long as grain may be sold as grain. Incidentally the number of hogs marketed in 1945 though three million down was yet over 60 per cent above the number marketed in 1939.

Trend of Prices

	1945 Jan. $	*1945 Dec.* $	*1946 Jan.* $
LIVE STOCK:			
Steers, good, per cwt.	12.13	11.55	12.20
Cows, good, per cwt.	8.75	9.10	9.05
Cows, common, per cwt.	6.40	7.15	7.20
Canners and cutters, per cwt.	5.05	5.80	5.90
Veal, good and choice, per cwt.	15.00	15.25	15.20
Veal, common, per cwt.	11.29	12.77	12.05
Lambs, good, per cwt.	12.42	13.90	13.05
Lambs, common, per cwt.	6.11	10.20	10.58
Bacon Hogs, B.1, dressed per cwt.	17.75	17.95	19.10
ANIMAL PRODUCTS:			
Butter, per lb.	0.35	0.36	0.36
Cheese, per lb.	0.22	0.21	0.22
Eggs, Grade A, Large, per doz.	0.35½	0.40	0.35
Chicken, live, 5 lbs. plus, per lb.	0.27	0.28	0.28
Chicken, dressed, milk-fed A, per lb.	0.35	0.35	0.36
FRUITS AND VEGETABLES:			
Apples, B.C. McIntosh, Extra fancy, per box	3.50	3.85	.....
Potatoes, Quebec No. 1, per 75 lb. bag	.....	1.85	1.90
FEED:			
Bran, per ton	29.00	29.00	29.00

Lachute Co-operative Transports Milk

The problem of how to get their milk from Lachute to the Elmhurst Dairy in Montreal was solved by a group of Argenteuil County farmers by organizing a co-operative milk hauling association.

Under the war-time regulations, obtaining four years ago, it was not possible for an individual to purchase a truck and start a new hauling business. But this ruling did not apply to a group of producers who needed a vehicle to haul the products of their own farms. So it was that the Lachute Co-operative Syndicate came into being.

An area covering parts of three municipalities is served by this organization. At the start, only one truck was needed. However, the membership soon increased until it became necessary to purchase an additional one. Now the association owns two modern, covered vans, which are used exclusively for hauling milk. They are stored in a heated garage at Lachute and serviced regularly. Full depreciation is written off each year and this money is set aside as a reserve fund to replace present equipment when necessary. Both vehicles are fully paid for. The haulage rate has been set at 20 cents per can for this year and the milk is picked up at the milk house. Total capacity of the two trucks, when fully loaded, is two hundred and twenty cans.

The membership fee is ten dollars. In addition to this each member is required to loan to the Co-op. the sum of thirty dollars, all of which must be paid in cash at the time of joining. No interest is paid on capital subscribed but a patronage rebate will be paid to each shipper, beginning this year.

At the annual meeting the members review the financial statement and elect a board of five directors. When milk surpluses occur during the summer the extra milk is delivered by the drivers to the place specified by the Board.

Members of this organization are proud of the fact that they are practically pioneers in the field of Co-operative milk hauling in the Province of Quebec. One member expressed his appreciation of its value by saying, "Now we know where our surplus milk goes. Not any more will some privately owned hauling outfit take this milk where it happens to suit them best."

The President of the Board of Director this year is John Heatlie and the Secretary is Ted Smith.

Co-operative Purchases Bulldozer

The Co-operative Society of Isle-Verte made an important decision at its last general meeting when its members authorized the Board of Directors to purchase a powerful "Bulldozer" for the improvement of local farms. This tractor will remove stones and boulders and will attend to all grubbing and levelling work.

The Co-operative has been studying the project of this purchase for some two years now, this question having been started by the local U.C.C. previously and its realization put into effect by the members of the Co-operative. In hilly and stony districts, the "Bulldozer" is to-day considered as an indispensable instrument as it does a vast amount of work at a very moderate cost.

Isle-Verte Co-operative has been the first to acquire a machine of this type for its members' use.

Co-op. Business Increase Ten-Fold

Mr. W. H. MacEwen, Manager of the Maritime Co-operative Services, Moncton, N.B. discussed trends and events in his field of activity with the agricultural representatives in conference at Truro, "It is necessary", he said, "that farmers be organized in groups in order to do for themselves what they want to do. It is also important that all concerned agree on policy and proceed to the objective by the same road". In that connection he expressed the belief that farmers have never really got together to realize the full benefit of their strength. Some idea of the advances made in the business end of co-operation in the Maritimes was conveyed by Mr. MacEwen when he said that in 1945 the business volume of his organization was ten times that of 1935. It now employs 60 people, has outgrown its quarters and is continually branching out into new fields of service to its members.

Cockshutt Company Makes Agreement With Co-operatives

Cockshutt Plow Company has announced that an agreement has been reached, whereby Cockshutt will manufacture tractors, harvester combines, swathers, and tiller combines at Brantford for Canadian Co-operative Implements Limited.

Due to shortage of supplies resulting from labor and material difficulties, the supplies of machinery to Canadian Co-operative Implements Limited will be limited in 1946 to harvester combines and swathers. In 1947 and subsequent years Cockshutt will supply Canadian Co-operative Implements Limited with adequate supplies of all the machinery indicated above.

A similar contract has also been made with the National Farm Machinery Co-operative of the U.S.A.

Cockshutt equipment marketed through its usual dealer channels will continue to bear the familiar Cockshutt colors. Machinery produced by Cockshutt for distribution by Canadian and United States Co-operatives will be identified by the Co-op. name and distinctive colors.

Whereas the production of tractors in Canada has hitherto been hampered by lack of volume in the domestic market, Mr. Cockshutt explained that contracts such as the one made with Canadian Co-operative Implements Limited and National Farm Machinery Co-operative, In., insure sufficient volume to make it possible and practical to manufacture tractors in Canada.

MASTITIS . . . *(Continued from page 4)*

1. A badly infected cow, particularly when stanchioned among the non-infected cows. This cow's milk will contaminate the floors, utensils and milker's hands and under insanitary milking procedure will carry the bacteria to other cows in the herd.

2. Purchased additions: mastitis can be introduced into herds in this way, because inflammatory changes are not easily recognized when a cow is "springing". Furthermore, experienced dairymen know that an attack of mastitis is apt to result in a permanent or recurrent carrier, and such cows are sold.

3. Faulty stable construction, insanitary milking and injuries may either start or increase the spread of mastitis. A very large percentage of cases develop as a result of udder injury due to such factors as short, slippery stalls, insufficient bedding, which forces the cow to lie on a cold, dirty surface, uneven temperatures, calves sucking and bunting, and, most important, cows treading on one another's teats. Insanitary milking includes stripping of fore-milk on the floor, wetting one's hands with milk to facilitate milking, neglect in washing one's hands in antiseptic solutions or failure to disinfect machine teat cups after milking each cow.

4. Cows that are easily milked are more apt to become infected than hard milkers, and old cows are more susceptible than young ones. Freshening and drying-off stages are critical periods.

5. Excessive feeding and diseases such as *contagious abortion* and *retained afterbirth* may play important roles in the incidence of mastitis. Contamination of the udder by vaginal discharges is very dangerous.

Mastitis can be diagnosed by several methods; physical examination of the udder and various bacteriological and chemical tests of the milk can be employed. *The value of the service which the veterinarian can render, particularly in the diagnosis and treatment of mastitis, cannot be overestimated.*

Control Measures

The control of infectious mastitis requires real co-operation. The duty of the owner can be outlined as follows:

1. Good stable accomodation should be provided so that injuries to udders will be minimized. This phase includes well cleaned and limed platforms, adequate bedding to prevent chilling and sufficient room between the animals to ensure that a cow cannot step on her neighbour's teats.

2. With the services of a veterinarian a survey of the herd should be made; physical examinations, milk tests, etc., will enable the owner to classify his animals. This information, together with records of daily strip-cup tests which can be made by the milker, is used for the purpose of grouping the cows according to the health of their udders. Normal cows should be first grouped together and always milked and otherwise handled first. The next group should be the mildly infected cases and finally the cows with badly diseased udders, light quarters, etc., should be placed together at the end of the line and always handled last.

3. Never introduce new cows until they have been thoroughly examined, tested and thus classified.

4. Continue to use a strip-cup to test the fore-milk at each milking. This detects "flaky" milk which is at least suggestive of mastitis and suspicious cows can then be moved away from healthy ones and brought to the attention of the veterinarian.

5. Have all affected cows treated during the period of lactation or while they are dry. Slaughter all badly infected cows or those with *fibrosed udders*. The modern treatment employed may involve the use of penicillin, sulphonamides or other drugs, administered by udder infusion, inoculation or by mouth. It should be noted, however, that different drugs need be given in proper dosage and form to be effective and this makes it apparent that they should only be used by or on the recommendation of a veterinarian. Unfamiliarity with therapeutic technique may lead to serious consequences, as for example, when organisms not susceptible to the drug being employed are introduced at the time of udder infusion.

6. Allow at least six weeks rest between lactations.

7. Insist on a routine of sanitation, as follows: (a) Before milking, wipe udders and teats with mild, warm (120°F) antiseptic solution, using a clean cloth or separate cloths for each cow. (b) Collect bad milk in a pail containing disinfectant. (c) Milk cows dry at each milking and immerse teats in antiseptic solution afterwards. (d) Milk badly infected cows last and milk them by hand. (e) Immerse milking machine teat cups for two minutes and wash hand carefully in antiseptic solution when starting to milk, as well as between cows. (f) If the herd is large, divide it so one milker has clean cows, another infected cows. (g) Keep flanks and udders clipped.

8. Dairy products for human consumption and milk for calf feeding from infected herds should be heat sterilized.

In the final analysis one can say "mastitis can be controlled", but the job is a big one and will never be done by the veterinarian alone. The veterinarian will obtain favourable results when treatment is under his supervision. The dairyman will lighten his problem if he looks at mastitis as a preventable disease. Reports indicate that success in controlling *chronic bovine mastitis* relies upon the adoption and pursuance of a rigid herd management programme, characterized by constant watchfulness, mutual understanding and co-operation between veterinarian, herd owner and his helpers.

Order Seed Potatoes Now

We have said it before, and we repeat: order certified potato seed now.

DEPARTMENT OF AGRICULTURE

Activities, Plans and Policies of the Quebec Department of Agriculture

Recommendations for Orchard Fertilization in 1946

From the Quebec Fertilizer Board

In view of the present conditions of Quebec orchards following the extraordinary season in 1945 these special recommendations are made for the fertilization of orchards in the spring of 1946.

In the western part of the province

1. For old established orchards where most of the area is covered with trees, the following should be applied broadcast: Ammonium sulphate, 450 to 600 pounds per acre in orchards where the soil is neutral or alkaline, as in the Oka, Montreal, St. Remi and Hemmingford districts,

or

Ammonium nitrate, 300 to 400 pounds per acre, which can be used on neutral or alkaline soil as well as on acid soil.

These fertilizers should be spread as uniformly as possible, but should not be applied near the trunks of the trees.

2. In orchards where there is considerable space between trees, apply 1 to 1½ pounds of ammonium sulphate or ½ to ¾ pounds of ammonium nitrate for each inch of trunk diameter, around the base of each tree in a wide band extending to within 2 or 3 feet of the maximum spread of the branches.

3. For orchards in sod with considerable space between trees and where the sward is thin, make a supplementary application of a complete fertilizer (4-8-10, 4-12-6, 2-12-6) between the rows of trees, on the portion that did not receive any application of nitrogen.

4-8-10 and 4-12-6 are recommended for grass sod; timothy, orchard grass, meadow grass, etc. and 2-12-6 for clover and alfalfa sods.

If the spread of the tops of the trees equals one-quarter of the total area the recommendation is 225 to 300 pounds per acre; 150 to 200 pounds if the spread is half the total area; 75 to 100 pounds if the spread is one-quarter the total area.

In the eastern part of the province

In the Quebec and lower St. Lawrence districts, where damage to foliage has not been so severe and where the growing season is shorter, slightly smaller quantities of nitrogen are recommended than elsewhere. As the soil in this district is on the whole acid, only ammonium nitrate is recommended. Apart from this, the recommendations are the same as above.

1. For broadcast application in old orchards, 200 to 300 pounds of ammonium nitrate per acre.

2. For application around the trees, ⅓ to ½ pound of ammonium nitrate per inch of trunk diameter.

3. See recommendations for the west of the province.

When to fertilize

It is of the utmost importance that chemical fertilizers containing nitrogen should be applied early in the spring, as soon as growth has commenced, or about three weeks before bloom commences. If applied too late, these fertilizers will have very little effect on yield, but will retard the hardening — off period in the fall and render the trees liable to extensive winter injury.

Use of borax

The use of borax is recommended to control corky core and similar physiological disorders and farmers who find these troubles in their orchards should investigate the use of this material. A single application of boron has been found to be effective for three years. As soon as any trace of corky core has been found in the orchard, the following application should be made.

2½ pounds of powdered borax per 100 gallons of spray, mixed with the other ingredients. Two applications are recommended, the first with the calyx spray and the second with the next spray on the schedule. More details will be found in the "Guide to the spraying of orchards" which is published by the Provincial Department.

Magnesium sulphate

Magnesium deficiency results in smaller fruit and retards maturity. Symptoms of this deficiency need a specialist to identify, and appear on the foliage after the end of July. The leaves become discoloured and brown patches, varying in appearance with the variety, appear.

For orchards whose soil is highly deficient in magnesium the following treatment is recommended, to be applied the following year:

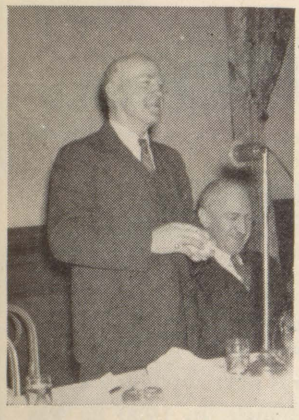
Add 20 pounds of magnesium sulphate to each 100 gallons of spray material; four sprayings are recommended with this material, beginning with the calyx spray.

The best results from fertilizing will always be apparent in orchards which have been properly managed and cultivated.

TEXT BOOK ON FARMING

"Farming in Canada" is an account of common farming practices in this country, written by the late Hon. Duncan Marshall. It should be useful reading to farmers, and particularly to veterans returning to the land. It is published and distributed by the Cockshutt Plow Co. of Brantford, Ontario.

Quebec Ayrshire Breeders Hold Annual Meeting



The most important item of business transacted at the annual meeting of the Quebec Ayrshire Breeders Association, held in Montreal on January 28 and 29, was approval of proposed revisions to the regulations covering R.O.P. testing. In brief, the new regulations, which will be submitted to other annual meetings for approval by other breeds and finally to the Department of Agriculture, are as follows:

1. The herd test plan will be instituted; in other words, all animals of milking age in the herd go on test automatically, though permanent nurse cows, cows with two or more quarters blind, and cows with a previous record of over 100,000 pounds may be omitted.

2. There will be a one-day test once a month with no preliminary milking.

3. Barn sheets will be retained until the end of the test, weights recorded daily, but owners will not be required to send in monthly reports as in the past.

4. Not more than 30 cows will be tested in any one day; if it is necessary for the inspector to remain over a second day to complete the testing, a double fee will be charged.

5. Surprise test checks may be held at any time.

(Further information about the changes, with comments on their purpose and results hoped for, will appear in an early issue. ED.)

The report of the Secretary, Jacques Berthiaume, showed that the organization has made steady progress; in 1945 there were 986 members, 5,644 registrations and 5,112 transfers, all of which represent increases over 1944. Field days and Red and White Shows were the main activities during the year, though it is hoped to organize a provincial sale next year.

The luncheon meeting was presided over, as were the business meetings, by the president, S. J. Chagnon, and the guest speaker was Don Cumming, president of the national association. He gave a brief report of his activities during the past summer, much of which he spent visiting Ayrshire clubs right across Canada. In all quarters, he said, he heard adverse comments about the general quality of Ayrshire bulls and, inasmuch as this criticism was so general, he thought it worth while to suggest that something should be done to correct this situation — perhaps by more rigid culling of the females in the herds. He paid a tribute to the organization and general management of the Quebec association which, he said, compared very favourably with any he had visited elsewhere.

Mr. Chagnon pointed out that a market for milk products can be expected to develop if an adequate volume of milk is assured this market, and that manufacturers are only waiting for an assurance of this volume to set up processing plants. With Quebec's unique possibilities for milk production, he thought that the future looked very bright.'

He also mentioned that several young men from Mexico will come here in the near future to study dairy techniques; Mexico is looking for high quality dairy cattle, and this may develop into a really large market for our Quebec farmers. In order to develop these possibilities to the fullest, he urged once again that all possible steps be taken to lower unit costs of production, and to improve herd quality generally.

Speakers at the afternoon session included Prof. Toupin of Oka who described briefly the progress made by the provincial association in the past few years and J. P. Fleury who outlined some of the activities of the Federal Department of Agriculture which have to do with herd improvement. Much of this work is centered around the young breeders, and junior club work accounts for about half the time of all the men in the division. He mentioned that a national conference on boys and girls club work is to be held in Winnipeg in April, when the whole programme will be critically examined and revised, and a drive will be made to increase the memberships in these clubs to at least 100,000. Prof. Ness of Macdonald College dealt with herd classification and made it clear that herd classification of itself is not of much value unless it is tied in with R.O.P. records; but the classification of a particular animal which brings with it detailed records of milk production is of great value, particularly to breeders who

Directors and officers of the Quebec Ayrshire Breeders' Society for 1946. Front row, W. Erskine Rodger, W. Timmermans, Douglas Ness (vice-president), S. J. Chagnon (president), Jacques Berthiaume (secretary-treasurer). Back row, A. Lavallee, M. Joubert, J. E. Bissonnette, F. Hungerbuhler.

are buying stock from a distance and have no chance to see the animal in which they are interested. He emphasized the fact that all these records and test reports are valuable provided they are properly and carefully interpreted by those making use of them.

R. B. Sabourin of the Provincial Department made a plea for better quality and better methods. Of 150,000 herds in Quebec only 25,000 are headed by pure bred sires, and we are short of both good bulls and good heifers. Douglas Ness discussed the R.O.P. changes which were dealt with above.

The committee on resolutions, in addition to the usual messages of thanks to all those who had helped the association during the year, asked the Federal Government to make the advantages of control measures for Bang's Disease available to all breeders, and to provide information on the necessity of vaccination. Restricted areas to prevent easy migration of infected cattle were also proposed. It was also suggested that an immediate study of the possibility of establishing artificial insemination centres be undertaken.

Raoul Dionne Passes

Raoul Dionne, Head of the Livestock Branch of the Quebec Department of Agriculture, died suddenly at his home in Quebec on February 4th at the age of 49.

A farm boy, he graduated from Ste. Anne de la Pocatière with a B.S.A. degree in 1918. He worked for a time for a firm manufacturing farm implements, then joined the staff of the Department of Agriculture as an agronome after a short period with the Federal Department. He was local agronome in various districts for a time, was promoted to be regional agronome at St. Hyacinthe, and was next appointed assistant chief of the Livestock Branch. In 1940 he was named Director, a post which he occupied until his death.

A capable and popular figure, his loss will be keenly felt in livestock circles in this province and by his colleagues in the Department.

Tobacco is an important crop in Joliette

This co-operative, which was organized in 1938, looks after details of harvesting, grading and packing into hogsheads the cigarette tobacco grown by its members, and this one co-op. handles about half the total production of flue-cured cigarette tobacco which is grown in Quebec. The rest of the crop, grown by independent producers, was all sold last fall.

The Joliette co-operative has just completed the sale of last season's crop in a single transaction involving over $800,000.00. The total value of the cigarette tobacco crop in Quebec is about $1,500,000, and of this $1,200,000 worth comes from the Joliette district.

The total value of all farm crops in the Joliette district is estimated at between eight and nine million dollars, and the tobacco crop, which was only at the experimental stage fifteen years ago, accounts for a very large proportion of this total.

St. Francis Ayrshire Club

The Annual meeting of the St-Francis Ayrshire breeders Club was held in the Provincial Agricultural office, Lennoxville, on Thursday, January 10th, with David Bolduc, the President, in the chair. Mr. Bolduc read a letter from Mr. J. A. Lambert, giving his resignation as secretary, which was accepted with regrets.

A letter was read from Mr. Berthiaume, Provincial Fieldman, expressing his regret at not being able to be present and asking that the Club appoint an official delegate to the Provincial meeting to be held in Montreal on January 28th and 29th.

The election of officers for 1946 followed. Mr. J. A. Ste-Marie was asked to act as Chairman for the election.

The following were the Directors elected:

Sherbrooke County: R. Ste-Marie, P. Audet, J. M. Petit, F. Young, Frère Georges. Stanstead County: W. O. Miller, C. Whitcomb, Albert Dubé, W. Tremblay. Compton County: A. Coté, L. Kinnear, H. V. Burns, N. Audet. Richmond County: R. Fowler, A. B. Lyster, D. G. Ross, V. Messier. Drummond County: Armand Paul, Sam Doyle, Philip Lamoureux. President: W. O. Miller. Vice-President: Frère Georges. Sec.-Treasurer: W. G. MacDougall (temporary sec.), D. J. MacMillan, assistant.

As the President, W. O. Miller, could not go to Montreal for the annual meeting, Frère Georges was appointed as the official candidate. A discussion took place on field work, R.O.P. work, bull classifications, herd classifications and Red & White Day. Mr. J. A. Ste-Marie was asked to explain the new proposals regarding R.O.P. work and what the other breed associations were doing to promote their breed. It was then decided that a field day be held in June about the 25th or 27th, and that sale of calves would take place at the field day.

Mr. L. Kinnear offered a heifer calf for the drawing at the field day.

It was also decided that a Red & White Day be arranged at either Richmond or Ayer's Cliff Fair.

It was decided to ask Mr. Berthiaume, the Fieldman to spend at least two weeks in the District during the coming year and that if possible this time be spent in visiting the breeders previous to the Field Day.

The Club decided to do all possible to have a good exhibit of Ayrshires at all Fairs in our district and to assist in the purchase of heifer calves for Junior club work.

Where Stands Quebec With Pastures

by L. C. Raymond

It is good practice from time to time to review the development or trends that are taking place in any or all of the various phases of our agricultural activities. There is always the danger that the immediate problem may mask the larger picture.

A basis for such review of the pasture situation is provided, in part at least, by a survey of the provincial field by workers of the Quebec Department of Agriculture. This along with observations and reports from other sources will form the background for this brief discussion.

Interest in Pasture Improvement

Fortunately it is possible to report a very genuine interest in pasture improvement. Without this very little progress indeed could be expected. Several reasons may be suggested to account for this situation. The price of milk products has been high and the demand almost unlimited for the past several years. Income has been on a higher level also and more money has been available to effect improvements which had been deferred to a favorable period. The direct relation between good pastures and farm income is all too evident.

Relatively high prices for milk products has focused attention anew on the relative cheapness of milk from pastures as compared with that produced when the stock is stabled. While situations will vary, estimates place summer milk at one-half to two-thirds cheaper than winter milk. The better the pasture usually the greater the difference.

More and more cases are being reported in the farm press of improved pastures having a carrying capacity of well over a cow to the acre for the season. These may be simply the result of good management or more likely a combination of the management plus a well adapted seeds mixture and adequate fertilization. Whatever the cause they have had their effect in stimulating a real interest and a desire to obtain a like result.

Not by any means the least important reason for a renewed interest develops from a much more general realization that our old unimproved pastures have really reached a very low ebb and are rapidly getting worse. A much greater tendency is noted to regard the farm pasture as a crop to be managed, fertilized and reseeded when necessary, just as with any of the other farm crops.

Diverse Types and Requirements

As was anticipated, the survey revealed a very wide variation in approach to pastures. The reasons for this are in large part explained and justified by the very different nature of the terrain alone. Add to this the marked difference in the economic angle such as distance to market and the resulting diversity of outlet — fluid milk vs. cheese or butter — or the still greater difference of beef or dairy cattle, and it is at once apparent that varying treatments of the whole pasture problem are indicated. Space will not permit any extensive discussion of this angle but a full appreciation of the existing situation must be kept in mind when any recommendations are made.

An excellent pasture consisting mainly of Ladino clover and reed canary grass, on the bottom land along the Rivière du Chêne above St. Eustache.

Quebec Photo Service

Trends in Pasture Improvement

Two broad groupings must be recognized. 1. Those where tillable land is utilized — which are largely found in the flatter sections, and usually, but not always, on rather heavier soils. 2. The reverse situation where tillable land is scarce and pastures occupy the rougher and very often the poorer and more remote parts of the farm. These two types are very different and must be dealt with separately.

1. Tillable Pastures

While probably by far the greater number of farmers using tillable land for pastures follow the practice of incorporating their pasture right in the regular farm rotation, a surprising number have registered disappointment in such a scheme and have gone rather to the idea of short term pastures, grazed rotationally, with the area so handled in close proximity to the barn. This is notably the case where the operator is in the whole milk trade and where returns from milk constitute the main source of farm income.

The reasons for this trend are not difficult to determine. Pastures in the regular rotation are preceded by one, two or sometimes three crops of hay. In the great majority of cases the legume element seeded has largely or entirely disappeared, leaving a wholly grass mixture or often timothy alone. In the absence of any additional fertilization since the time they were seeded such pastures can be very unproductive and certainly in a poor position to cope with the all too prevalent summer drought.

In contrast with this, a short term seeding of the best suited mixture, used exclusively for pasture from the seed-

ing year, grazed rotationally and well fertilized, makes a very different picture. There is in addition the added advantage of permanence of location, in relation to fencing and water supply and the very considerable convenience of having the milking stock close to the buildings. Needless to say a higher level of production can be confidently expected where the pasture is thus regarded as a crop, to say nothing of improved quality. Such an arrangement will call for a higher expenditure than in the farm rotation scheme, but under the proper set of circumstances the increased possibilities will clearly outweigh the added cost.

2. Rough Land Pasture

Pastures on rough untillable land have always presented a much greater problem in many respects than those that can be plowed. Such pastures of course vary widely in the degree of roughness — notably in their stone content. In general it is true that the moisture supply — one of the most important climatic factors — is better in these areas of higher rolling country.

In general pastures so located have been restricted to surface applications for any improvement measures employed. It is not often that such a management factor as clipping can be made use of since the land is too rough for machinery, and as a consequence excess growth and particularly weeds and shrubs are difficult to keep in check. Generally if the existing sward is reasonably good, treatment of these areas with fertilizers and/or lime produces a worthwhile effect — in some cases phenomenally good — and immediately encourages the development of the wild white clover, thus greatly improving the pasture as a whole.

During the past two years the provincial department has made available, to a limited extent, the use of bulldozers to enable stone and shrub removal, and to permit levelling off of hummocks in these rough pastures. This is a very worthwhile service and can greatly improve such pastures, particularly from the management side. Some judgment must be exercised, however, in the use of a bulldozer for this purpose. In some instances too much levelling has been undertaken, and the whole surface soil with its load of organic matter has been stripped from considerable sections leaving nothing but sub-soil exposed, which is calculated to take quite a few years to get back to a productive state. In general, however, little but good can follow the practice of bulldozing a rough pasture, if this is followed by adequate fertilization and reseeding.

Grassland Farming

The term "grassland farming", while not yet a commonplace, is appearing frequently in the agricultural press. Grassland farming of course means something more than just pastures, but the grazed portion of such a farm is, however, basic to the whole undertaking.

Only very brief reference to it can be made at this point. As the name implies, grassland farming means more specialization, wherein no attempt is made to grow grain crops, where even silage corn is often deleted, and the whole effort thrown into the production of first quality hay and/or grass silage and pasture. A farm so managed is no longer as self-contained, dependence being placed on the general market for mill-feeds and concentrates.

Some of the advantages of such a scheme are obvious. The problem of working the farm is greatly simplified and the labor requirements reduced, since there is a minimum of land broken at any one time and no grain to be seeded and harvested. To justify such a scheme at all it must admit of an increased stock carrying capacity to cover the cost of purchased feeds. Through this extensive purchase of feed and the greater quantity of manure, plus less erosion from sod land, it should prove easier to maintain or increase the fertility.

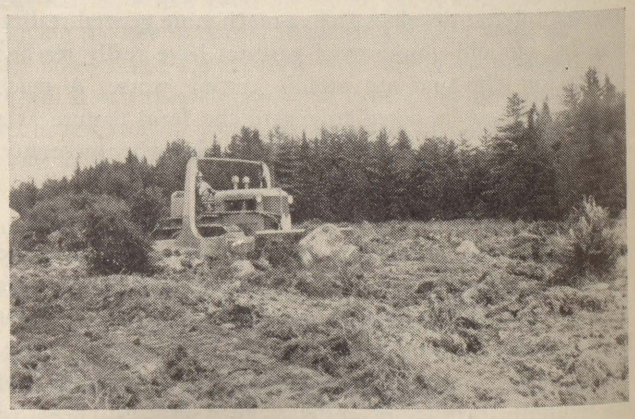
Such a plan does, however, call for better over-all management, both of crops and livestock, to justify its adoption. There are farms now in Quebec which are operated very successfully under this principle, and a fair number of others where it would seem to be well adapted. No wholesale change of plan should, however, be made. Many farms exist where the yield of grain crops, for one reason or another, is on the average low. Droughty soils and those very liable to erosion are cases in point. Under such circumstances consideration may well be given to replanning the whole farm on a grassland scheme. Before embarking on such a radical change, however, a very careful study should be made of the whole situation.

New Kinds of Grasses and Clovers

Much interest has developed in some of the grasses and legumes which are relatively new to Quebec agriculture. Among these may be mentioned particularly Ladino clover — a legume — and in the grasses such kinds as reed canary and brome grass.

We are particularly in need of a more perennial and larger growing legume than has heretofore been available, and we do require, very badly, herbage varieties of any sort that will better withstand our very persistent summer droughts. In fact, the wider the adaptability of our available species the better can mixtures be devised to suit the highly variable existing conditions.

Ladino clover — seed of which is now available



Quebec Photo Service

A bulldozer makes short work of shrubs and stones in an Eastern Townships pasture.

through most seed houses — has been given the most attention. Under suitable conditions of good moisture and fertility this plant has an important place to fill. Not all farms by any means can provide entirely suitable conditions for this legume. Its winter hardiness has yet to be entirely proven. It is, however, very well worth a trial.

Brome grass, in addition to being hardy, palatable and productive, has very considerable drought resisting qualities. Mixed with alfalfa on well-drained and even dry areas, it has given very good results. One outstanding difficulty presents itself. The seed is very large and light and difficulties are experienced in seeding and very frequently in getting a stand.

Reed canary grass is a wet land sort. While highly palatable to stock in the young stage, cattle do not relish it in the more mature condition. While mainly adapted to wet areas, it will grow very well in anything but very dry and hard fields, and it is permanent and productive.

These three species can be utilized under the conditions outlined to make our seeded mixtures for pasture fit the soil conditions somewhat more exactly, with the resultant increased productivity.

Conclusions

The trends discussed will have presented a rather general picture, but will perhaps serve to emphasize some of the important pasture considerations. Pastures represent but one of the many phases of a farm, but, most people will agree, a very important one. Good pastures with poor stock make an unprofiitable combination. An expensive seed mixture followed by poor management is also a bad arrangement. Good stock on well planned, properly managed pastures goes a long way to insure a profitable return from the farm as a whole.

EDITORIAL . . . *(Continued from page 1)*

not alone from the greater stability of a primary industry, but from the production of cheaper food as an indirect result of such researchers.

Yet how do we treat these scientists who, at their own expense, and after years of arduous and conscientious effort, fit themselves for this task?

Dr. L. P. Bailey in a recent article in the Agricultural Institute Review quotes some sensational facts relating to men of the highest qualifications and ability who have worked for as long as seventeen years on work of national importance, making original, substantial and pace-setting contributions, without getting beyond the $1400.00 per year class. While it is clear that the Department has been able to do a lot better than it deserved in retaining the services of such men, it is equally clear that the situation does not encourage outstanding young men to enter or stay in the service. Such treatment is not fair to these men; but it is equally unfair to the farmer, whose problems require the service of these highly skilled and qualified workers.

Industry can afford to pay for such services what they are worth to them, but in farming there is no such concentration of wealth in large units. Therefore, it is a matter of national interest for Governments to assume the responsibility. The agricultural scientists who have earned the gratitude of all those who have the welfare of our agriculture classes, should be accorded at least as good treatment as those who serve our industries. It is highly gratifying to learn that the Minister has promised that something, is to be done about it.

THE WOMEN'S INSTITUTES SECTION

Devoted to the activities of the Quebec Institutes and to matters of interest to them

Work for Peace

by Dorothy Ellard

In the war years we women have worked hard and long. We felt we had an incentive, something to work for — Victory. Now that we have achieved that objective and are at peace we must work just as hard to keep that peace. It's going to be a tremendous job but what greater objective could one have than that. The people in the liberated countries have to be clothed and fed. They look to us to help them. The need for relief for the children is a matter of life and death to them.

One way that Quebec Women's Institute can help in this humanitarian work is through the Canadian Committee of "Save the Children Fund." This branch is one of many of the world wide "Save-the-Children International Union" which is an affiliation of child welfare organizations in 26 countries, including England, France, U.S.A., Switzerland and Sweden. Its headquarters are in Geneva. Its objective is a world-wide purpose to preserve child life, wherever and however menaced, regardless of nationality, politics, creed or color. This Fund in Canada is registered under the War Charities Act. Help is needed to further the immediate objectives of emergency relief and to promote the significant and long term task of rebuilding the bodies and renewing the faith of war-ravished children. They must learn again to laugh and how to play. Homes, friends, schools and prolonged medical care must be maintained or otherwise they will become a burden to society and a menace to future peace. Cables are received such as the following from Geneva. "We now require help, 500 Polish children just arrived from German concentration camps." $1000 was cabled to Geneva immediately and an additional $2000 was sent later. This is from the Canadian Fund and that is where your money goes if you give.

In England the Canadian Fund helps to maintain residential nurseries, day nurseries, junior clubs, mobile kitchens, medical dispensaries, cod liver oil, warm clothing, vitamins and other commodities. These are needed now to ease the severest European winter since the war began. With your help these precious gifts can be sent in time to save children's lives. In the haggard faces and wracked bodies of these children of war lie our children's hopes for peace. Any sum, large or small, will be gratefully acknowledged if sent to Mr. E. Jay Hawson, Hon. Treas., 320 Bay St., Toronto.

Then there is a plan called the Individual Child Sponsorship. By this plan an individual or a group donates $96 to feed or clothe a child for one year. These children have been placed in foster homes in Europe by different committees of the International Union, Geneva. A Canadian sponsor receives a picture of the child, together with his or her case history. A personal contact between the child and his new found friend, or friends, is encouraged. The helping hand thus provided goes far to restore both the body and the faith of a child who for so long has felt nothing but the hand of every man against him. This would be a wonderful objective for the Q.W.I. but of course we can't all take on an individual sponsorship. But send whatever you can and as soon as you can, prompt response means lives saved.

An Appeal to All W.I. Members

A very serious menace threatens our country today as a result of the housing shortage. The appalling conditions that exist in our cities and even in some smaller centres is bound to have a bad effect on the physical and moral development of our people, especially on the children.

At the same time, there are still many vacant farms which might be made profitable again. It is not impossible for an inexperienced man to learn farming, though he may have to start on a small scale. There is no question that living conditions in the country, even without some of the conveniences of town homes, are far better than the almost incredibly crowded state that has been reported from the city.

Is there any way of making these country places available to the city dwellers? The Post-War Rehabilitation Committee of the Quebec Women's Institutes is attempting to do this.

All County Presidents will shortly be asked to list any vacant property in their vicinity, for this purpose. Obviously this is not a task for a small committee, but it needs the best efforts of every county, every branch and every member. When the request comes, please be prepared to act promptly, remembering that if five families are enabled to improve their living conditions, the work has not been in vain.

—*Alice C. Dresser.*

The Semi-Annual Board Meeting

Gloom spread over the meeting of the Q.W.I. Board when word was passed around our beloved and efficient president, Mrs. W. C. Smallman, was unable to be present owing to illness. Keen regret at her enforced absence and hope that she would soon be restored to health was expressed by all those present. The chair was ably filled by the first vice-president, Miss Alice Dresser.

A highlight of the opening session at Queen's Hotel, Friday evening, Jan. 18, was the showing of films prepared by the National Federation of Institutes, England. These films have been loaned to the F.W.I.C. and are to be shown in all the provinces. They gave a vivid presentation of what the W.I. is doing in that country to promote thrift by utilizing what would otherwise be waste material and instruction in handicrafts, special attention being given to quilt and rug making.

Mrs. P. C. LeBeau, representing Mr. Emile Gauthier, brought greetings from the Dept. of Agriculture, Quebec. She expressed her pleasure at being present and the enjoyment she felt in the opportunity to assist in the work of the W.I.

Miss Evelyn Walker gave an interesting report of her work among the branches of the province. The report was packed with varied activities, judging at school fairs, talks and demonstrations — to mention a few. She urged the members to make more use of the pamphlet library at the Q.W.I. office.

A comprehensive statement of the finances was given by Mrs. Harvey. This showed a balance on hand of $2,088.88. The Self-denial Fund receipts for the past year totalled $764.74, a slight decrease from the previous year.

Guest Speaker Heard Saturday

"What can *you* do?" This pertinent question was addressed to the gathering by Mr. Eric Morse, national secretary of the United Nations Society of Canada, at the morning session on Saturday. "No body of women in the country has more will for peace and influence behind the scenes than the W.I." he declared. The ultimate goal, world government, is a slow process only to be worked out gradually, he continued, constant education will be necessary to build up public opinion to support the government in any commitments they may have to make. "What is going to make us go forward?" the speaker asked in conclusion, "urgency, confidence and public education" and asked the support of our organization in this vital task.

A challenging message from Mrs. Smallman was read at the opening of the period. Let us consider ways to improve ourselves and others" she urged. Increase in membership was still an objective and asked the question of

(Continued on next page)

Chateauguay - Huntingdon

by **Marjorie Orr**

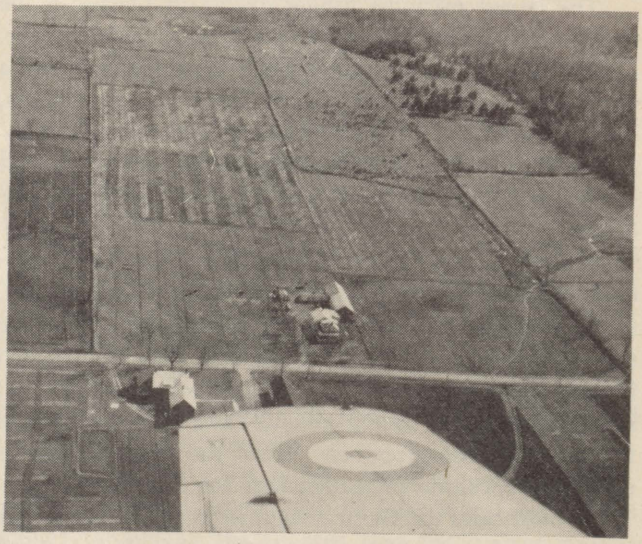
At the beginning of the last century the hardy pioneer, as he toiled on his weary way from Lake Champlain to the west, on looking down from one of those spurs of the Adirondacks which nearest approach Canada, could see a great plain stretching northward until ended by a range of hills similar to that on which he stood, namely the Laurentians. In the centre of this vast plain the gleam of the St. Lawrence would catch his eye. It is that portion of the plain that lies south of the St. Lawrence that we find the counties of Chateauguay-Huntingdon; a triangle formed by the international border line, the base starting at Chateauguay Basin and the apex at St. Regis.

These counties are now one of the most highly cultivated districts in the Dominion. The chief industries of the counties, outside the manufacturing in the towns, is dairying and fruit growing. Apples in large quantities and various species being the chief fruits.

There is one weekly newspaper; "The Huntingdon Gleaner," published in Huntingdon. Also two hospitals, "The Barrie Memorial" at Ormstown and "The County Hospital" at Huntingdon. Several textiles are manufactured in the latter town.

During the war of 1812, when President Madison declared war on Great Britain, this section came into the history books. The towns and surrounding communities of Hemmingford, Havelock, Russeltown Flats, Franklin, St. Chrysostome, Huntingdon, Chateauguay and many others figured prominently.

Seven branches of the W.I. are active in these counties. Mrs. W. C. Smallman, provincial president, being a member of the branch at Dundee.



Taken from the air, showing a well-laid out farm and orchard similar to many in the Chateauguay-Huntingdon counties. Farm owned by F. Beattie of Hemmingford, Quebec, and part of the W. H. Stewart farm.

policy for Junior Institutes be studied. In this connection it was decided to leave the matter with Mrs. T. H. Kirby who has charge of the work.

A pleasing feature was the presentation of the Self-denial Fund to Major Corrigal of the Canadian Red Cross Society. This ceremony was most graciously performed by the treasurer, Mrs. G. D. Harvey, the cheque amounting to $845.69. Major Corrigal, in thanking the W.I. for this contribution, spoke of the work being done for war brides and told of the Canadian Red Cross Hostel in Montreal where these women with their children were entertained during their stay between trains on their way to their destination. The fund is to be used for that purpose this year. This project is to be continued under a new name. Suggestions were asked for, these to be brought to the convention in June.

Notes from the Agenda

Mrs. H. Ellard, War Services Convener, made a strong plea for continued support for the work of relieving the distress in the liberated countries in Europe. The work of the "Save the Children Committee" was especially commended as a worthwhile project for the W.I.

$100 is being sent to the Princess Alice Fund from this province. Although the entire sum has not yet been raised it is confidently expected it will soon be forthcoming.

The handicraft films were felt to be of such value an effort is to be made to bring them to as many branches as possible.

Visitors

Mrs. G. F. W. Kuhring was a welcome visitor at this session. She brought a letter of thanks from Mrs. Byrne Sanders and Mr. Donald Gordon for the support given the W.P.T.B. by the W.I. This recognition of our efforts was very gratifying.

Mrs. P. C. LeBeau was another honored guest. Her interest and efforts on our behalf are very much appreciated and she was warmly thanked by Miss Dresser.

Mrs. C. E. Dow and Mrs. A. E. Abercrombie, representatives from the F.W.I.C. and our own Miss Walker were also present and contributed much to the success of the gathering.

(Further details will appear in the next issue)

Wealth From the Waters

by Marjorie E. Hurley

A great many would be astonished to learn that the annual catch of fish in the maritime waters of Quebec is about 100 million pounds. About half of this amount are cod. In addition seals are caught in the lower St. Lawrence at the rate of about 33,000 annually. Fresh frozen and salted products of the Quebec fishing industry have been of prime importance in Canada, and other countries in the past few years when meat rationing has brought about a new appreciation of fish as a supplementary source of essential proteins.

The largest maritime fishing district of Quebec is the Gaspe region where 60% of Quebec's total catch is made. Dried Gaspe Cod, "Gaspe Cure," has long enjoyed a world-wide reputation. In several Gaspe fishing districts, relatively primitive fishing methods are still in vogue. Fishing by hand line is quite common in the north and east sections of Gaspe. In the Bay of Chaleur a deep sea line is used.

Fishing, as practiced in Gaspe, is a rough trade. It is quite common for the fisherman to put in a 20-hour day. In the evening he looks after his herring nets, gathering the bait which will serve him the next day. If the catch is small he must make another attempt before daylight. At sunrise he is at the fishing grounds, and he doesn't return to port until late afternoon. When the deep sea line is used, the expedition sometimes lasts for two days.

In most cases the Gaspe fisherman is also a farmer. He owns several acres of land, which satisfy his domestic needs, and in the winter he works in the forest.

Along the North coast of the St. Lawrence and in the Magdalen Islands seal hunting is a lucrative profession. The seals weigh about 225 pounds each and the average annual catch of about 33,000 represents an appreciable quantity of fatty and protein products. Young seals have a white silky fur which is used in making ornaments. A good quality of oil and fish flour is obtained from the adults and their skin is used by the leather industry. Edible, soluble and toilet oils as well as soap are also products of this industry.

Quebec's lobster industry, which last year marketed 2 million pounds, is also centered in the Magdalen Islands. Caught in open water and on rocky bottoms, the lobsters of the islands are regarded as superior to those caught in bays or mouths of rivers.

For about 10 years the maritime fishing industry of Quebec has been undergoing a marked changeover from salted products to fresh and frozen fish. In 1939 only 15% of the cod caught in the Gaspe area were marketed as fresh and frozen products. This figure was increased to 75% in 1944. This tendency has been accelerated by the Provincial Government's construction of refrigeration warehouses along the coast. The freezing capacity in these centres has reached the level of 140 tons of fish daily, and the storage capacity is 11 million pounds.

The inclusion of seafood in the diet in reasonable quantities is protection from iodine deficiency that causes simple goitre, and it also adds materially to phosphorus intake of the body. The homemaker should know how to purchase the fresh seafood as well as the canned and frozen.

Our Coming Governor General

by Florence R. Mortimer

Born on Dec. 10th, 1891, the 3rd son of the Earl of Caledon and Lady Elizabeth Graham, Field-Marshal Alexander is an Ulsterman.

He has all the physical assets so essential to a successful commander in a modern war. He is an athlete, distinguishing himself as a cricketer, and long-distance runner at both Harrow and Sandhurst. Is blest with an admirable digestion, can sleep to order, is good tempered, and by practising his own ideas on physical fitness, is perhaps in better mental and physical condition than most men many years younger.

He served during the first Great War, going to France with his regiment (The Irish Guards) in 1914. He served with one or other of its battalions throughout, except when recovering from wounds, and for a short time when commanding an army school. He was awarded the D.S.O., M.C., French Legion of Honour and the Russian Order of Saint Anne. He was promoted to Major in 1917 but had already been acting Lieutenant-Colonel in charge of a battalion at the age of 25.

Between the two wars he served in North Russia, the Dardanelles and on the North West Frontier; but it was at Dunkirk, in this war, where he commanded the rear-guard, that he came to the fore, giving proof of that military genius and leadership which have won him the admiration of the Allied Nations. At Dunkirk he paced the beaches until the last; equipment shining, boots blacked and clean shaven. To him the smart appearance makes for morale. Again during the retreat from Burma, he was a model of what a soldier should be, the worse the situation became, the more trim his appearance.

At the end of 1940 he became Lieutenant-general and was appointed Commander-in-Chief, Southern Command.

Early in 1942, he flew to Burma to take command there. It was an ungrateful task for there was no hope of saving Burma, but he gave India time to prepare to resist the Japanese, and he did somehow manage to extricate the most of his small army. In August 1942, he was again promoted Commander-in-Chief, Middle East, where again things were going bad.

From these hard schools, Dunkirk and Burma, he moved to the desert to the task of backing his brilliant lieutenant, Montgomery; finally commanding a great allied army and winning in Tunisia one of the most brilliant victories in history.

Sicily, and Italy, Naples and Rome, followed. In Italy he became supreme commander of troops composed of British (more than 50% came from the British Isles) but the remainder were as mixed a force as Britain has ever gathered under her colours. Besides the Americans there were Canadians, Australians, New Zealanders, Indians, Gurkas, Poles, Greeks, Brazilians and Jews. Under Sir Harold they became a force of wonderful efficiency.

In 1944, Sir Alexander, succeeded Sir Maitland Wilson as supreme allied commander in the Mediterranean, his task becoming political as well as military. One instance, the trouble in Jugo-Slavia after the unconditional surrender of Italy. At this time he was promoted to Field Marshall.

Field Marshall Alexander is one of the ablest and most efficient soldiers of the war, possessing the ideal temperament for the responsibility and the disappointments of that task. He has proved that he can hold together an international force, that he has the patience, the tact and the wisdom of a diplomat, as well as the skill of a strategist. He has endeared himself to the soldiers of all nations. Those members of Canada's armed forces who were under his command, will welcome his appointment, and these qualities of his will serve him well in his new job.

When the news of his appointment came from Buckingham Palace it was received with enthusiasm. It is known that he regards his appointment as a high compliment. Canada may also think of it as a compliment to herself.

In 1931 he married the Lady Margaret Bingham. They have two sons and one daughter. Rose aged 12, Shane 9 and Brian 6.

Lady Margaret is good-natured, courteous and very friendly, dark and vivid in colour, is without affectation, and will make a delightful chatelaine for Rideau Hall. We hope that having lived in the country in England, she will have known something of Institute life and work there. We do know, that at any rate, we shall have her interest here.

We shall welcome Sir Harold and Lady Alexander and their family to Canada and hope that their stay with us will bring joy and happiness to them all.

Poultry Courses Planned

Again this year a series of short courses on poultry raising will be given by the Department of Agriculture, in co-operation with the Youth Training Plan, of which Louis Philippe Audet is the director.

Three courses have been arranged so far, and others will be announced later. They will be held at Maniwaki from February 25 to March 2; at l'Isle Verte March 11 to 16; Notre Dame du Lac from March 25 to 30.

These courses are free and may be attended by men or women; the age limits are from 16 to 35. Board and transportation are provided.

Instruction is given in all phases of poultry raising, and it is expected, in view of the interest manifest in this subject throughout the country, that the courses will be well attended. Applications can be sent to the local agronome or the district poultry inspector.

Strippings

by Gordon W. Geddes

The January showing of the National Film Board movies was the best of the season. It would be great to see a portable X-ray machine come within reach of us. The film on rural electrification in the United States was also interesting though the conditions shown before the arrival of electricity were somewhat exaggerated. Gasoline power can replace man- or woman-power on some jobs when electricity is out of reach. Apparently the American Rural Electrification Act goes much further than our own.

An Electricity Co-operative is in the process of formation around here now. But many people still find the cost too high, in fact, many feel that they can make a better deal with the local power companies than they can with the Co-operative. By any method the cost is entirely out of line with farm prices. Certainly it is to be hoped that the government policy in forming electricity co-ops. is more clearly defined than it is in the case of agricultural co-ops.

When we organized our agricultural co-op. we were given to understand that the provincial government would give a loan guarantee for 60% of the purchase price of our creamery to complete our financing of the deal. This was the general custom but the letter of the law states that the circumstances vary and conditions of guarantees are decided according to the merits of each case. After we made the deal and a down payment, conditions for a guarantee were set so high as to be out of reach. If a local man had not subscribed for $2,000 in preferred stock and a Caisse Populaire taken a loan for the balance, our Co-operative might well have collapsed. As it was the delay made a lot of unnecessary trouble and expense. Regulations concerning such guarantees should be definitely stated in the law and should be the same in all cases. This would prevent such unfortunate occurrences and remove the opportunity to play favourites or at least to remove the feeling that such had been done.

Farm Forums in Stanstead, Sherbrooke, Richmond and Compton counties need not worry over the difficulties of making a Land Use Survey. The work is already done and published in a neat booklet. But the person who might benefit most from this is one selecting a farm to buy. For those on the farm wishing to know how to handle their soil, analysis of soil samples will give more definite information. A very complete service is furnished by the Fertilizer Division of Canadian Industries Limited at Montreal.

Results from the ones sent this fall proved very interesting. Some were taken from what we class as almost sandy land, part of it a high knoll. But it had been growing alfalfa with fair success for several years. When ploughed it was covered with the tap-roots and had been top-dressed with manure each fall. We were rather puzzled as to what fertilizer to use for grain next spring. Tests showed a good supply of organic matter, not too bad on lime and only slightly acid. It was well limed six years ago. Recommendation was the use of 300 to 350 lbs. per acre of 0-14-7 if we used some Cyanamid for mustard control. Nitrogen in the Cyanamid might cause some lodging of the grain as would the 2-12-10 fertilizer without Cynamid. However, since alfalfa needs lots of potash and this soil lacked it, a further application of 2-12-10 to the new seeding of alfalfa in the fall would be advisable.

This year we hope to get some Brome grass with the alfalfa. It has done well on high land in some parts of Quebec and Louis Bromfield found that the two together seemed to do better than either one did alone. We have tried some Brome before without much result but Professor Raymond thinks it is worth trying since it does so well if a catch is obtained. He suggested shallower seeding since the Brome must be sown from the grain box with the grain.

Tests from a pasture plot needing renovation showed high content of organic matter and not too bad for acidity and calcium in spite of the fact that it needs drainage and has never been limed. It looks like a good prospect for improvement with drainage, manure fertilizer and a new seeding.

Not much snow so far. Too little for comfortable hauling but just right for cleaning up down wood. The worst trouble is that one can see every stick that is down and it takes longer to get them cleaned up. But they will make some sugar-wood. It is surprising too how many firs have reached the stage where they need cutting for pulp or logs. Anyway they make a good cash crop and there is a ready market now.

Oilseed Crops

A review of the 1946 position of the oils and fats situation by the Combined Food Board showed a substantial deficit of supplies against requirements. The world's exportable surplus which was divided approximately three ways, i.e., between the United Kingdom, the United States and Canada during the period of 1942 to 1944, must now be apportioned among sixteen or more claimants who are demanding their fair share of world supplies. It is in the light of these facts that the Dominion-Provincial Conference on Agriculture recommended that the flaxseed and sunflower acreage be increased and the rape-seed and soybean acreage maintained.

It Pays to Work Together

At the recent annual meeting of the Cumberland County Farmers' Association, the President, Mr. L. G. Stevens of Wallace Grant, spoke very highly of the experience his neighbors and himself had had in operating a tractor acquired under the "Tractor and Equipment Purchase Policy" administered by the Nova Scotia Department of Agriculture and Marketing.

In the spring of 1944, ten farmers in the community of Richmond purchased a tractor with plows and harrows. They arranged for one operator and two assistant operators, each receiving the same pay while working and each having the responsibility of the equipment when operating and while it was under his care. "This past spring we harrowed 175 acres. We find it is of great assistance in getting work done in a hurry. We have a large trailer on which all equipment can be loaded. Travelling time . . . while moving from farm to farm is one mile in six minutes," said Mr. Stevens in the course of his remarks.

This group of neighbours also purchased a threshing machine, with self-feeder, blower and bagger attached. Incidentally, such equipment is not eligible for assistance under the policy mentioned above.

In conclusion, Mr. Stevens said, "All in all this project has been working out very satisfactory in our community, and I cannot see why it should not be made to work in any community in this county by everyone agreeing to give and take just a little bit."

Alfalfa for Milk

When alfalfa hay is fed as the sole item of the ration, the dairy cow will produce from 50 to 85 per cent as much milk as when a part of the alfalfa is replaced with grain, even though there is no increase in the total digestible nutrients. Part of this decrease in production may be explained in view of the fact that the high producing dairy cow is unable to consume enough alfalfa hay to meet her energy requirements during the early stages of the lactation period; in addition to this, alfalfa hay is low in phosphorus, and any ration poor in phosphorus is known to reduce milk flow. The low fat content of alfalfa hay may be another factor, but is less well understood.

It was found that when 13 to 25 per cent of the total digestible nutrients of the ration were supplied by grain the milk production climbed to the expected levels. Ground soybeans provided the greatest response, but each of 12 different concentrates had a beneficial effect. Making up the phosphorus deficiency with added minerals failed to have the desired effect.

—From Journal Daily Science.

Six years ago 72 percent. of all cheese produced in Canada was made in Ontario. In 1944 only 58 percent. was made in this province while Quebec production had jumped from 21 to 35 percent. of the total. Quebec has also shown a decided increase in evaporated and condensed milk production, making 25 percent. of all of the former made in Canada and 44 percent. of the latter, as compared with practically none a few years back.

Hints on Winter Storage of Fertilizer

(1) Store fertilizers in any dry building with floor above the ground. Do not store in a stable or in space directly above, or on a concrete or dirt floor. Planks placed on 2 x 4's make an ideal base on which to pile the bags. When possible, cover with dry hay or straw.

(2) Stack bags closely together to reduce circulation of air from which fertilizers absorb moisture.

(3) Do not store higher than 8 to 10 sacks deep and cover if necessary with such materials as dry hay or straw.

(4) Keep broken bags separate from the main pile. Loose fertilizer is likely to absorb moisture and damage the good bags.

(5) Make separate stacks of mixed fertilizer and each fertilizer material. This makes it easier to clean up any spilled fertilizer and keep it separate.

(6) Keep ammonium nitrate and nitrate of soda away from hay, feeds, and organic meals to prevent fire. For the same reason, burn all empty paper bags from which sodium nitrate and ammonium nitrate have been emptied.

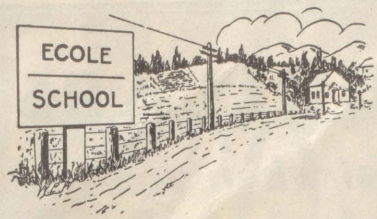
(7) Keep farm animals away from the storage pile.

(8) If fertilizer cakes hard enough, so that ordinary handling does not break it, drop the bag on each edge and both sides from waist height and roll it over a few times.

The extra fertilizer the farmer can get for next spring's crops by ordering and accepting delivery now will more than pay for the trouble of storing it over winter.

Hogs

At the Dominion Provincial Conference farmers were asked to maintain production close to 6 million hogs in 1946. This is the minimum number which would make possible the fulfilling of the 1946 contract with the United Kingdom for 450 million pounds of bacon, and at the same time provide supplies in a rationed domestic market at a level which should prevent the development of a tendency to divert marketings into irregular channels.



LIVING AND LEARNING

"To Farm Forums"

by Ralph Staples*

As I write our train is skirting a lake, all frozen and white, somewhere near Chapleau, Ontario. It is late afternoon. The sun has gone. The cold winter twilight and the darkening woods give me that lonesome feeling I used to experience when we could see to use an axe no longer, and we put on our coats to start up the snowy trail for home and supper.

Lately I have experienced many homecomings of a very different sort. You sit on a train or bus or plane instead of walking through the woods. You have time to take stock of the situation. Sometimes you wish there were less time. You don't have to worry about milking the cows after supper, it's true. But you can do plenty of worrying if you like. At this kind of work results are often hard to see. There are no neat piles of wood or skids of logs to prove that your efforts were not misspent. Often there is nothing to prove it. You wonder if you're moving in vacuum. You ask yourself if you are losing your touch. Swinging your invisible axe against imaginary trees.

Even when things are really going well there is still plenty of scope for worrying. You wonder over and over if you contributed anything to progress. Maybe things would have gone as well if you hadn't been there. Perhaps really better if you hadn't made that clumsy remark or that terrible speech.

The fact is that this year, for whatever cause, Farm Radio Forum is going well. In every province except little P.E.I. there are more Forums than ever before at this date. We never had the whole of mainland Canada so consistently on the march before.

The number of Forums is a good index of current activity — or perhaps more truly of the previous activity which got them under way. But there are signs which augur well for the future far more prophetic than the actual number of Forums, increased though that number is.

Now National Farm Radio Forum has arrived. You can see the evidence everywhere. The sponsoring organizations know it, our national office knows it, the provincial secretaries know it best of all. How can one tell? You sense it. Committees have a more business-like air. More people in official positions recognize it as a real factor in the Canadian agricultural community. More people approach you and say "that was a good broadcast last night". There are other forms of evidence too.

James Turner, President of National Farmers Union of Britain whom you heard from Quebec on November 5 and who later visited Forums, has become a Forum enthusiast and has spread our doctrine far and wide. That wouldn't likely have happened a couple of years ago.

More and more provincial departments of agriculture are organizing Forums through their field service as part of their work because modern extension activity is carried on through groups.

Nova Scotia Agriculture College, University of Saskatchewan, Ontario Agriculture College, Macdonald College, Alberta Agricultural Schools, these and perhaps others have Forums among the student body on an increasing scale.

Farm Radio Forum is carefully watched by those whose interests are considered to be at variance with farmers. Just let a Provincial Secretary quote a Forum criticizing any of those middleman organizations which think they are above criticism, and very stiff and official letters begin to circulate. Perhaps one should add that National Farm Radio Forum has been able to maintain its right to broadcast whatever opinions the Forums happen to hold.

Here is another angle. The areas of Canada where Forums have been strong are still strong in spite of the predictions of the pessimists. Many of these Forums have been active for three or four years — some longer. Farm Radio Forum is here to stay.

When a national educational project, built through the voluntary part-time efforts of large numbers of people, attains widespread support and official recognition there must be a sound reason behind it. That reason is the need of the hour. Farm Radio Forum is one of those powerful ideas whose time has come.

We are building. We are building, in a modern way a structure in keeping with the times. Modern rural communities are developing — and rapidly. Further they are being drawn together by the genius of radio though scattered over the wide dimensions of this great country. Farm Radio Forum doesn't just talk about it — it does the job.

**Reprinted with permission from Food for Thought.*

Highlights at London

Alex Mercer of British Columbia pled for legislation for the North America Indians in both the English and Chinook tongues. This unprecedented departure into a new tongue caused quite a disturbance among the otherwise well behaved delegates.

* * *

Another B.C. farmer asked for Farmers' Day to be the equivalent to Labour Day. No one disagreed with the principle of the farmer working only 364 days, but a discussion followed whether it should be on the third Monday of June, or not. A Scotsman won the day by saying it should be June 21, the longest day of the year, so the farmer could get his money's worth.

* * *

The origination of National Farm Radio Forum from Hotel London was an interesting feature. It was pleasant to meet Orville Shugg and Don Fairbairn once again.

* * *

Prof. "Mac" Drummond gave a scholarly statement on the question of price subsidies. It is to be hoped the *Journal* can publish this later.

* * *

L. C. Roy, the Federation representative on the War Assets Corporation spoke to the conference. A resolution was passed calling for the release of more trucks, and the direct sale to farmers of other goods.

* * *

The Dairy Farmers of Canada are urging the organization of cream producers, and a better price for them. This is in line with similar resolution forwarded to them by the Quebec Council of Farm Forums.

The London Free Press covered the conference very fully. Their issue of January 21st carried a number of "ads" welcoming the Federation. Some Directors were entertained by the Rotary Club which was addressed by Vice-President "Bill" Parker. The local radio station carried a series of interviews with delegates. The directors were given a lunch by the Middlesex Federation of Agriculture.

Farmers Summer Camp

Plans to set up a permanent summer camp have just been announced by the Manitoba Federation of Agriculture and Co-operatives, with a proposed budget to finance it of $15,000.

The purpose of the camp is to provide facilities to bring together the groups of different ages and interests and to give training in community leadership, including public speaking, conduct of meetings, and discussion of educational, recreational, health, and all such problems that have to do with the betterment of community life.

When the camp site is built it will start with accommodation for 100 at a time, and it is expected to make the project self-supporting at an over all rate of $1.00 per day.

FARMER'S WORLD VIEW . . . *(Continued from page 2)*

could expect more resolutions of this type. But it does seem that two resolutions on social questions are too few for a national organization that represents the bulk of the farm population. Nor does it seem to reflect the temper of the farm people as represented in the Forum Findings. One must be fair to the Board. Resolutions may have passed the Board without being referred to the Annual Meetings; these would not reach the public. It is to be hoped therefore that the Board has dealt with, or will deal with, such questions as health, rural housing, rural electrification, federal grants to the provinces to permit improved education for rural people, conservation of natural resources (other than the soil) such as water power, and wild life, Veterans Land Act policies, and physical fitness programs for farm people.

Again, one must go to the Presidential Address to find a broad declaration of purpose on these matters. Early in his address, Mr. Hannam said:

> "Equality for agriculture is not just a nice sounding phrase or slogan which may appeal to farm people because it can be interpreted as a promise of more for themselves. On the contrary it sets up a goal which to farm residents, envisions rural homes, rural schools, rural medical and hospitalization services, rural churches, rural libraries and rural recreational and cultural opportunities which compare favorably with those enjoyed by urban citizens on the average."

Yet these questions are probably minor to the all important fact that there is an effective working unit which is known as the Canadian Federation of Agriculture. The interests that seek to broaden its scope on economic and social issues must organize and finance themselves sufficiently in order that they can bring their views and resolutions before the annual meeting.

Canadian farmers are fortunate. They have one national body, not four as in the United States. They have an organization which has the respect of all and the sympathy of most high officials in the departments in Ottawa that deal with farm interests. They have an organization that will do Canada, and her farmers, credit at any international gathering whether it be FAO, IFA, or other organizations not yet convened. Our prestige abroad will be enhanced by the delegation which was chosen to represent Canada at London, England next spring.

Once again at this annual meeting one was struck with the maturity of judgment, the knowledge of the economics of agriculture, and a grasp of the techniques of policy and strategy.

1946 promises to be a big year for the Canadian Federation of Agriculture.

What Farm Forums are Saying

Geneva, Argenteuil. "That the youth of our community have more facilities for health and recreation." —*Douglas A. Rodger.*

Crystal Falls, Argenteuil. "We do need a credit union, a marketing co-operative. . . ." —*Mrs. F. Brown.*

Tullochgorum, Chateauguay. "Most members thought that at some future date a quick freezing and storage plant would be very welcome in the community." —*Hugh Cameron.*

Lascelles, Gatineau. "We feel that something should be done for better health and dental service for the rural area." —*Mrs. Stanley Chilcott.*

Rupert, Gatineau. "Little or nothing can be done in most communities by individual action." —*Arline M. Kilgour.*

Herdman, Huntingdon. "We still are planning on having our soil analyzed this year as we need that the most of anything." —*Henry O. Wallace.*

Boyd Settlement, Huntingdon. "It was suggested a spraying machine should be purchased by the municipality." —*L. M. Kelly.*

Rougemont Station, Rouville. "This group is unanimously agreed that soil conservation measures are needed and that a land survey should be conducted." —*J. K. McArthur.*

Stanbury, Missisquoi. "It was agreed that a bulldozer would improve pastures, increase dairy production and crops. This Forum is trying to secure a bulldozer combined with other forums." —*Arnold Crosby.*

Purdy Hill, Shefford. "Community action is needed in the eradication of brush and weeds along our fence rows and roadsides, and information wanted on the newer chemical means of killing them." —*Wilbur Wallace.*

Spring Road, Sherbrooke. "We have literature on Fire Insurance, and would like to persuade other groups in district to take an interest in the subject." —*Beatrice G. Cameron.*

Ogdensburg, Argenteuil. ". . . The majority thought they should like to have a local unit of the Federation of Agriculture. . . ." —*Mrs. John Heatlie.*

Melboro, Richmond. "The CFA can only be strengthened by local organizations such as Farm Forums. We need more Forums, more interest in using the facilities than we have." —*H. W. Fowler.*

Riverfield, Chateauguay. "The CFA efforts could be expanded in the field of distributing information concerning the activities, problems and policies of organized agriculture." —*Donald McKell.*

Harrington, Argenteuil. "We think the nation farm organization is not as effective in Canada as it might be. We would suggest a larger membership and a greater interest among members as well as non-members." —*Mrs. J. M. Dobbie.*

Ogdensburg, Argenteuil. "I.F.A. would help to assure us of a market for our products, a stability to our prices and the elimination of surpluses." —*Mrs. John Heatlie.*

Arundel IV, Argenteuil. "Well fed citizens should be good prospects for world peace." —*Mrs. Homer E. Cooke.*

What Farm Forums Are Doing

Coldbrook, Brome. "Electricity and telephones are needed and action has already taken place and everyone has hopes of obtaining them." —*Mrs. W. Austin Lee.*

Knowlton, Brome. "We have formed a committee to work on a co-operative hospitalization plan; we think that we can help to improve the health of our community in this way." —*K. Miller.*

Busy Bees, Gatineau. ". . . To get electricity is the most needed in our district. Already the groups have organized and are under way for it." —*Mrs. Everett Moore.*

Boyd Settlement, Huntingdon. "Boyd Settlement Forum recently purchased a carload of oats which was divided among the members at a considerable financial saving to them." —*L. M. Kelly.*

Kingsbury, Richmond. "This community has a 40-member co-op. creamery and cheese factory which was started by the Forums." —*H. A. Fowler.*

Austin, Pontiac. "The efforts of a Co-op. Farmer's Club in a neighbouring township was discussed and it was decided to send two Farm Forum members to their next meeting to see if they would accept, as members, farmers from our community. Then, if successful, a petition will be sent to the CNR for a stock yard at Clarendon Station." —*Mrs. A. A. Rose.*

Stark's Corners, Pontiac. "Mr. Alvin Brown, Shawville, wishes to take the short course in beekeeping mentioned in the greenleaf. He has already sent in his application. . . ." "The results of the Farm & Home Improvement Contest for Pontiac County have just been received and of the 12 prizes awarded, 5 of them were to members of our Forum and a 6th to a neighbour. Twenty-five contestants have entered the contest." —*Mrs. Clive Smart.*

Spring Road, Sherbrooke. "Delegates from various organizations in this vicinity representing upwards of 30 organizations were called to a meeting to form a Citizens Community Association for the purpose of promoting welfare, health, recreation, education, adult education, youth training, rehabilitation, and a suitable war memorial (not a monument)." —*Beatrice G. Cameron.*

Glenday Road, Sherbrooke. "At the Citizens' meeting held in Lennoxville a committee was formed to canvas citizens for membership. Within a month another meeting will be called and a 'Citizens League' will be formed. Two of our members are on the membership Committee." —*Mrs. W. T. Pearson.*

What Farm Forums Want to Know

Hallerton Forum, Huntingdon Co. *"We are badly in need of electricity. We would appreciate any advice as to what department we could send our application to have the present line continued so that we will all benefit from this really necessary farm servant."*

—Mrs. A. Derrick.

Similar requests for information on electricity have been received from the following Forums:—North River; Selby Lake; Ways Mills; Arundel 2; Spring Road; Minton; Rupert; Busy Bees; Wright; Purdy Hill; Cowansville.

In answer to each of these requests, we have mailed a copy of the Rural Electrification Act. This act explains in detail how and under what conditions farm people can have electric power lines extended to their homes.

For detailed information on this subject, correspondence should be addressed to Albert Rioux, Rural Electrification Bureau, Parliament Buildings, Quebec, P.Q.

Mr. Rioux has recently informed us that further explanatory material for English speaking farmers will soon be available from his bureau.

Selby Lake Forum, Missisquoi Co. *We are pretty much in the dark as to what a credit union is all about. Could you throw some light on the subject by sending us a few pamphlets on this subject."* *—Mrs. Edwin Lampman.*

This is one of several requests for information on Credit Unions which have come in during the last month.

Although there are many more Credit Unions in Quebec than in any other Province of Canada, little literature has been published in English. However, we have on hand three pamphlets which cover the subject very well:—

1. Credit Union — University of St. Francois Xavier, Nova Scotia.
2. Outline of Credit Unions in Ontario.
3. Model By-Laws of the Gardenvale Credit Union.

For further information on the details of organizing a Credit Union in Quebec, we suggest that you write directly to Montreal Credit Union League, Sun Life Building, Montreal.

Ogdensburg, Forum, Argenteuil Co. *"The majority of our group thought we should have a local unit of the Federation of Agriculture. At least they thought they should have more information regarding the means of forming such a unit. We would appreciate any material you might have on hand regarding this or where it might be obtainable."*

—Mrs. John Heatlie.

Ontario and Manitoba are the two Provinces having gone the furthest in developing county or district Federations of Agriculture. As a matter of fact, the Ontario Federation of Agriculture was organized after one or two counties had started federations locally.

The county unit is made up of representatives from local organizations and groups, and these vary considerably between counties. In any case, most of the farmers within the county are through one organization or another, represented on the county board of directors. Here are a few examples of the participating groups within a county:—County Council, Women's Institute, Concentrated Milk Producers, Fluid Milk Producers, Cheese Producers, Hog Producers, Plowman's Association, Breed Associations, Crop Improvement Association, Farm Forums, Junior Farmers, Co-operatives and many others. In a few counties, township units of the Federations have been organized.

Quebec farmers have been participating in the activities of the Canadian Federation of Agriculture somewhat differently. Lacking a Provincial Federation to represent them, their two largest farm organizations were asked to become members and appoint directors. They were Union Catholique Cultivateurs, and the Co-opérative Fédérée, both of which appointed one delegate to the Board of Directors of C.F.A. The Quebec Council of Farm Forums has not yet been asked to appoint a director, but two years ago was given membership privileges.

Of late there has been some talk of these three organizations joining together to form a provincial Federation. If such a move should take place, English speaking farmers of Quebec will be directly represented through their own Council.

The Quebec Council of Farm Forums is on record as favouring the organization of a Quebec Federation of Agriculture, and is urging that this move be taken. This would enable not only the three above mentioned groups from participating directly in the affairs of the national body, but would enable other farm organizations to enjoy the same privilege.

A few counties have what they call a County Farm Forum Committee. This is made up of representatives from all the various forums in the County. Its work is a good deal similar to that of the County Federation in Ontario.

Purdy Hill — Shefford County. *Community action is a felt need in the eradication of brush and weeds along our fence roads and roadsides. We need information on the newer chemical means of killing them.*

—Wilbur Wallace, Secretary.

Prof. John Coulson informs us that during the war years experimental work on chemical weed killer was retarded to a considerable extent. Consequently there has been a limited number of new chemicals developed for this purpose. However, in cases where complete eradication of all vegetation is required a heavy application of Household Borax is very effective. It is non-poisonous and tends to reduce fire hazard. If one application is not completely effective the material is cheap enough that a second application can be applied economically. A saturated solution

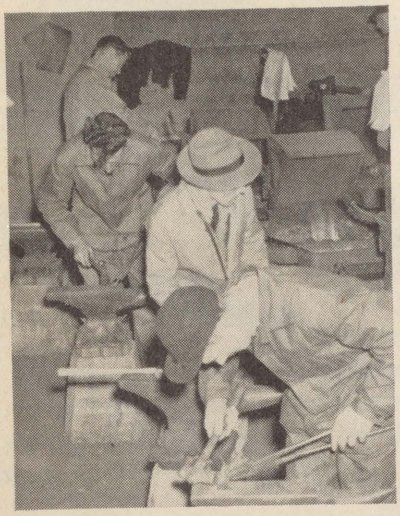
(Continued on Inside Back Cover)

THE COLLEGE PAGE

The Macdonald Clan

Notes and news of staff members and former students

Veterans Train as Repair Men



Part of the class at work in the forge shop.

Twenty young men, all veterans of World War II, are taking a six months' course in mechanics at Macdonald College. They started on January 11th and as soon as their course is finished, toward the end of June, their places will be taken by another class which will start early in July. These courses will continue until there is no longer any demand for this kind of training.

The Canadian farmer is becoming more and more dependent on mechanical equipment. In the old pioneer days the farmer made much of his own equipment, mostly of wood, and his tillage implements were naturally crude. But once the reaper and the binder came into common use, farming changed rapidly from the pioneer stage to the business stage. The farmer began to spend much more of his time in producing farm products for sale, and began to buy many of the things he used to make for himself.

As a result of labour shortages during the first Great War, the use of tractors and power machinery became much more general, and this increase in the use of mechanical equipment was particularly rapid between 1930 and 1940, as tractors became more reliable. And the shortages of the last few years have made it necessary for the farmer to depend more and more on mechanical equipment if he is to meet the demand for ever-increased production.

Now, this large increase in the number of machines being used in farming means that there must be shops in the country districts where this equipment can be serviced and repaired. In the horse and buggy days, the country blacksmith shop could handle practically all the farmer's repair work. When automobiles became common, the local garage and service station made their appearance. But when tractors became more or less standard equipment on the farm, there was a demand in the country areas for men who could service them. Automobiles and tractors are precision machines which usually cannot be serviced by an ordinary blacksmith. And now that so much power machinery is in use on our farms, the need for men who have been trained to service it is becoming more and more evident.

A few years ago a blacksmith could take care of nearly all the iron work on farm equipment. But today the rural repair shop must be able to do oxy-acetylene and electric welding; must be able to make parts on a lathe; rebuild storage batteries; repair and rewind electric generators and motors; repair and overhaul tractors, combines, tractor tillage machinery, feed grinding and mixing equipment and repair milking machines, electric refrigerators, water systems and all kinds of electrical machinery.

To train young men in mechanics, so that they will be able to establish themselves in their own rural repair shops, the Department of Veterans' Affairs arranged for a course to be organized at Macdonald College. Later, similar courses may be available in other provinces. The instruction is given in the Department of Agricultural Engineering by Prof. L. G. Heimpel and his staff, assisted by several new instuctors engaged to help with the work. The students

Staff and students of the Rural Repair Shops course.

in this first course are mostly from Ontario, with a few from Quebec and Nova Scotia, and all are veterans.

The course of study consists of:

Arithmetic and accounting	50	hours
Farm Power Equipment	137	"
Farm Machinery	137	"
Machine Shop	156	"
Shopwork in metal	156	"
Welding	112	"
Agriculture	50	"

Obviously, much of this training could be given at technical schools, but the advantage of giving it at a place like Macdonald College is that the instruction can have the agricultural "slant" that could not be given at a city technical school.

Any returned man interested in this course should read the Canadian Legion Educational Services booklet No. 4-(15), which describes course in detail and discusses the type of employment for which students are prepared. No rigid educational requirements are laid down for entrance but previous farm experience is considered essential.

Our photo shows Mr. and Mrs. Grant Parent, who were married at Ste. Annes on Jan. 5th. Mrs. Parent, formerly Miss Eleanor McNutt, graduated from Macdonald College with a B.H.S. degree in 1940, and Mr. Parent took his B.Sc.(Agr.) degree in the same year.

Grant Parent's father, L. V. Parent, Manager of the Canadian Wool Growers' Association at Lennoxville, is also a graduate of the College, and Grant is the first son of a former graduate to obtain his degree here.

To them both, our best wishes for success and happiness.

The Ormstownian

We would like to give a word of approval to the Ormstownian which is published by the Student Council of the Ormstown High School. Their January issue was a special Agricultural number with a coloured cover and cartoons.

The following interesting articles appeared:—

"Mink Coats" by Alan McEwen, Grade XII; "My Project" by Gerald Duncan, Grade IX; "Why I Intend to be a Farmer" by Gerald Pinsonneault, Grade IX; "What I've Learned from the Agriculture Course" by Bobby Anderson, Grade VIII; and "Potato Growing", by Carl Waller, Grade X.

An outline was included of the agricultural education work of Mr. Mabee, both in school and the community. Notice was also given of a course by Mrs. Greif on making over garments.

Nice going, Ormstownian!

Scholarships in Agriculture

La Corporation des Agronomes have two scholarships to be awarded for advanced work in Horticulture during the coming season. Each is worth $750.00.

The purpose of these scholarships is to encourage research on the use of muck soils for horticultural crops, through the study of new methods and techniques, either in Canada or the United States.

Awards will be made on March 30th, and applications, addressed to the Corporation, 10 St. James St. W., Montreal, will be received up to March 1st.

DDT — A Mixed Blessing

Dr. C. H. Curran, U.S. investigator, is quoted by writers in the "California Cultivator" as saying "Saipan Island is approaching a condition of devastation (following the application of DDT). No birds, no mammals, no insects except a few flies, and the plant life is decreasing. It seems possible that the same may happen on the island of Okinawa."

In the same paper credit is given to DDT for having brought about amazing reductions in the numbers of flies on poultry farms. However, it is a warning against wide-scale promiscuous use of this most powerful insecticide.

Dr. Neatby to Head Science Service

Appointment of Dr. K. W. Neatby of Winnipeg as Director of the Science Service, Dominion Department of Agriculture with headquarters in Ottawa, has been announced by the Department. He succeeds Dr. J. M. Swaine, who recently retired on superannuation after 34 years' service with the Department.

FARM FORUMS WANT TO KNOW . . .

(Continued from page 31)

sprayed on the plants is the most effective method of application. Borax can be purchased in almost any town or city.

The following bulletins will supply you with additional information on this subject.

1. Chemical Warfare on Weeds by Geo. Knowles. Central Experimental Farm — Ottawa.
2. Chemical Weed Killers, Ontario Agricultural College, Guelph.
3. Weed Problems and Weed Control in the Yakima Valley, 1944, Agricultural Experimental Station, Pullman, Wash., U.S.A.

THE WARTIME PRICES AND TRADE BOARD

FARMERS' BULLETIN

TO IMPORT U.S. BEANS

To supplement Canadian supplies of dried white beans and to satisfy demand, it has been found necessary to import lima and kidney beans from the United States. By an order effective January 9 last, price ceilings for these beans have been fixed on a basis of U.S. ceilings, plus transportation costs, plus the usual mark-up usually allowed to the trade.

SPECIAL CHEESE PRICES

Commencing December 15 last, makers of coloured Cheddar cheese were permitted to charge an additional one-sixteenth of a cent per pound to cover the increase in production costs over the cost for making white cheese. Also, price increases were allowed for the manufacture of special sizes, viz.: ¾ of a cent per pound for "Daisies" from 20 to 22 pounds, and 1⅛ cents per pound for "Stilton" and "Oblong" blocks of 10 to 12 pounds.

SPANISH ONION PRICE CHANGE

The one and one-half cent increase previously allowed on sales of Spanish onions (three inches) has been eliminated for the period of January 1st to August 31st of this year. Canadian producers of Spanish onions will not be affected by the change, owing to the lateness of the marketing of their product, but this Spring's importations will have to be sold at the same price as Canada No. 1 cooking onions. Below is the price schedule for farmer or shipper now effective for all grades of Spanish type onions with a minimum diameter of three inches. (Cents per pound).

Jan.	Feb.	March	April	May 1 to June 30	July 1 to July 15	July 16 to Aug. 31	Sept., Oct. and Nov.	Dec.
3.65	3.80	4.00	4.25	4.25	3.75	3.50	5.00	5.05

WEIGHT REDUCTION FOR RED LABEL BEEF

As of January 2, 1946, the minimum weight required for beef carcasses, graded in accordance with specifications prescribed for Choice Beef (Red Brand) as set forth in the Livestock and Livestock Products Act, 1939, will be 300 pounds instead of the 375 pounds as previously required.

PRIMARY PRODUCER COUPON COLLECTION

1. If You Produce Dairy Butter

You may consume in your own household all the home-made butter you wish but you must collect from the ration books and ration cards of members of your household valid butter coupons at the rate of two coupons for each pound of butter used (except that you need not collect more than the total number of butter ration coupons valid in such ration books and ration cards during the month covered by your report). If you sell your dairy butter you must collect valid butter coupons or other valid butter ration documents at the rate of 2 coupons for each pound sold.

2. If You Slaughter Your Own Livestock

Farm slaughterers must collect meat coupons for all meat consumed on their own premises at the rate of one meat coupon for every 4 lbs. of meat. They are not required to collect more than 50% of the valid meat coupons in the ration books of their household.

If you are a member of a beef ring or if you slaughter and sell to other farmers or if you slaughter for other farmers, consult your Local Ration Board.

3. If You Produce Honey or Preserves

You may consume in your own household all the honey or preserves that you wish without collecting coupons from the ration books or ration cards of your own household.

However, if you sell honey you must collect valid coupons or other valid ration documents on the basis of one sugar coupon for each 4 pounds of extracted honey or cut comb honey sold. (Comb honey in standard wooden sections is not rationed). Or if you sell preserves, as follows:

1 sugar coupon for each 40 fluid ounces canned fruit sold.
1 sugar coupon for each 24 fluid ounces jam or jelly sold.

4. Coupon Settlement

All ration coupons and other ration documents collected by farmers or other primary producers from other persons, together with coupons collected from the ration books of the farmer's household for products consumed on the premises, must be forwarded to the Local Ration Board monthly in RB-61 envelopes provided for that purpose.

FARMERS' RATION COUPONS

	Butter	Meat	Sugar-Preserves
February 7	139	23	—
" 14	R-1	24	—
" 21	R-2	25	70 and S-1
" 28	—	26	—

NOTE:—As in the winter months of past years, the butter ration has been reduced for the months of low production. Beginning January 1, a reduction from 7 to 6 ounces became effective.

For further details of any of the above orders apply to the nearest office of the Wartime Prices and Trade Board